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~~ANIMAL DAMAGE CONTROL ACT OF 1980~~

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HEARINGS

BEFORE THE

SUBCOMMITTEE ON DEPARTMENT
INVESTIGATIONS, OVERSIGHT, AND RESEARCH
OF THE
COMMITTEE ON AGRICULTURE
HOUSE OF REPRESENTATIVES

NINETY-SIXTH CONGRESS

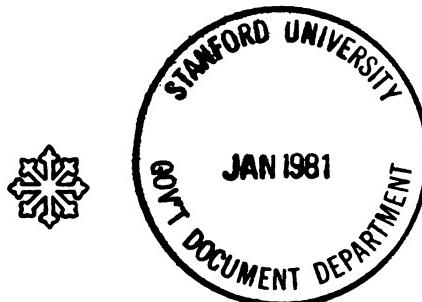
SECOND SESSION

ON

H.R. 6725 and similar bills

APRIL 16 AND 17, 1980

Serial No. 96-BBB



Printed for the use of the Committee on Agriculture

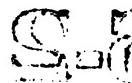
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ANIMAL DAMAGE CONTROL ACT OF 1980

WEDNESDAY, APRIL 16, 1980

**HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON DEPARTMENT
INVESTIGATIONS, OVERSIGHT, AND RESEARCH
OF THE COMMITTEE ON AGRICULTURE,
*Washington, D.C.***

The subcommittee met, pursuant to notice, at 10 a.m., in room 1302, Longworth House Office Building, Hon. E de la Garza (chairman of the subcommittee) presiding.

Present: Representatives Skelton, Wampler, and Grassley.

Also present: Representative Symms of the full committee.

Staff present: Fowler C. West, staff director; Robert M. Bor, chief counsel; John Hogan, counsel; Gary Norton, associate counsel; Glenda Temple, clerk; Bernard Brenner, Bert Pena, Mario Castillo, Jerry Jorgensen, Thomas E. Adams, and John Bailey.

OPENING STATEMENT OF HON. E de la GARZA, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TEXAS

Mr. DE LA GARZA. The subcommittee will be in order.

The Subcommittee on Department Investigations, Oversight, and Research meets today in public hearing to consider H.R. 6725, the Animal Damage Control Act, and on other similar legislation, although it is not listed.

Because of the urgency of the situation and the number of witnesses we have today and tomorrow, I will forgo any opening statement except to say that what we hope to do here is to bring some of the issues related to this problem into focus and to stop the emotional polarizing effect that seems to be getting worse in relation to this situation.

I would like to repeat what a great statesman once said: "Polarization generates only heat, never any light." Hopefully, we will bring some light to bear on this problem, which is a very serious one to a segment of the food industry as well as to those of us who have a great interest in conservation which includes the preservation of all species on this planet.

Unfortunately, man is the only species that does not forage for itself for sustenance and one of the main items of his diet is red meat. The source of supply of that part of his diet is of great importance. Those that supply it have a very serious problem that runs, conceivably, into millions of dollars.

This is a modest, humble attempt by several of the Members of Congress to bring a semblance of sanity to what seems to have gone astray. Hopefully, with men and women of good will, we will arrive

1 (5) use preventive control techniques to manage
2 offending predator populations.

3 (b) The Secretary of the Interior, in cooperation with
4 the Secretary of Agriculture, shall establish an ad hoc com-
5 mittee to review the activities carried out by the Secretary of
6 the Interior relating to animal damage control. Such commit-
7 tee shall be composed of members representing agricultural
8 and other affected interests. The review of such activities
9 shall be conducted every two years. The committee shall—

10 (1) assess the extent to which animal damage con-
11 trol activities are in compliance with the requirements
12 of this Act;

13 (2) assess the success of the program in reducing
14 animal damage; and

15 (3) make recommendations to the Secretary of the
16 Interior and the Secretary of Agriculture relating to
17 measures needed to make such activities more effec-
18 tive.

19 SEC. 4. The Secretary of the Interior and the Secretary
20 of Agriculture shall submit to the Congress, not later than
21 one year after the date of the enactment of this Act, and
22 annually thereafter, a joint report relating to the development
23 and implementation of the animal damage control program
24 provided for in section 3.

96TH CONGRESS
2D SESSION

H.R. 6725

To require the Secretary of the Interior, in cooperation with the Secretary of Agriculture, to implement certain requirements relating to animal damage control, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

MARCH 6, 1980

Mr. DE LA GARZA (for himself and Mr. LOEFFLER) introduced the following bill;
which was referred to the Committee on Agriculture

A BILL

To require the Secretary of the Interior, in cooperation with the Secretary of Agriculture, to implement certain requirements relating to animal damage control, and for other purposes.

1 *Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,*
2 *That this Act may be cited as the "Animal Damage Control*
3 *Act of 1980".*

5 SEC. 2. The Congress finds that—

6 (1) producers of livestock provide a valuable
7 source of food and goods to the American people;

1 (2) despite efforts to reduce damage caused by
2 predators of livestock, such producers continue to
3 suffer significant losses each year to their livestock
4 herds as a result of predator attacks;

5 (3) livestock producers have cooperated extensively
6 with Federal departments and agencies in developing
7 and implementing reasonable animal damage control
8 measures; and

9 (4) in order to reduce significantly the annual
10 losses that livestock producers suffer as a result of
11 predator attacks, the Secretary of Agriculture and the
12 Secretary of the Interior should jointly develop and
13 carry out a balanced animal damage control program
14 that effectively utilizes both lethal and nonlethal con-
15 trol measures.

16 SEC. 3. (a) The Secretary of the Interior shall conduct a
17 program relating to animal damage control in cooperation
18 with the Secretary of Agriculture and, in carrying out such
19 program, shall—

20 (1) use, and permit the use of, effective lethal and
21 nonlethal animal control devices, methods, and chemical
22 toxicants;

23 (2) undertake extended research activities relating
24 to chemical toxicants (including compound 1080) and

1 (D) snares.

2 (2) Undertake extended research activities relating
3 to chemical toxicants, including compound 1080, and
4 emphasize selective and environmentally preferred
5 lethal and nonlethal toxicants. Such research shall
6 analyze—

7 (A) the efficiency of such toxicants;

8 (B) the effects of such toxicants on the envi-
9 ronment and on animals other than the offending
10 species; and

11 (C) the advantages of certain toxicants.

12 Such research efforts shall be directed toward the
13 development and use of effective and environmentally
14 acceptable toxicants.

15 (3) Use and permit the use of toxicants, including
16 compound 1080, until such time as a more suitable
17 selective toxicant is developed.

18 (4) Undertake applied field research relating to
19 nonlethal animal damage control techniques and the
20 effectiveness of economically feasible husbandry prac-
21 tices in reducing livestock losses under various field
22 conditions. Such research shall analyze—

23 (A) the efficiency and cost of such techniques
24 and practices;

1 (B) the effects of such techniques and practices on the environment and on animals other than the offending species; and

4 (C) the advantages of certain techniques and practices.

6 (5) Use preventive control techniques to manage offending predator populations.

8 (6) Establish an ad hoc committee to review the activities carried out by the Secretary of the Interior relating to animal damage control. Such committee shall be composed of members representing agricultural and other affected interests. The review of such activities shall be conducted every two years. The committee shall—

15 (A) assess the extent to which animal damage control activities are in compliance with the requirements of this Act;

18 (B) assess the success of the program in reducing animal damage; and

20 (C) make recommendations to the Secretary of the Interior and the Secretary of Agriculture relating to measures needed to make such activities more effective.

24 SEC. 4. The Secretary of the Interior and the Secretary 25 of Agriculture shall submit to Congress, not later than one

1 year after the date of the enactment of this Act, and annually
2 thereafter, a joint report relating to the development and im-
3 plementation of the animal damage control program provided
4 for in section 3.

MR. DE LA GARZA. I have one final word. This is not an adversary hearing or procedure. This is hopefully a positive approach to arriving at some solution to the problem.

This morning we have several Members of Congress who are co-authors of the legislation. We will first call upon Hon. George Hansen, a Member of Congress from Idaho.

STATEMENT OF HON. GEORGE HANSEN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF IDAHO

MR. HANSEN. Thank you, Mr. Chairman. I would like to congratulate you on the timely introduction and consideration of this bill, which is essential to the well-being of the domestic livestock industry.

Mr. Chairman, I would also like to introduce, from my State, Mr. Laird Noh, representing the Idaho and National Wool Growers Association, and ask if he would please stand.

[Mr. Noh stands for recognition.]

Mr. Noh has been a long-time member of this group and is personally involved in wool growing. He understands the problem very well and, I believe, will provide most helpful information when he testifies later.

Predators caused \$60 million worth of damage in 16 Western States in 1977 alone. For that reason among others, Mr. Chairman, I have joined you and other concerned members of this committee in sponsoring this legislation to help farmers and ranchers protect their crops and livestock.

The Animal Damage Control Act of 1980 provides for effective and responsible methods to control predators and to protect the economic well-being of our rural communities and the food supply of the Nation.

Predation is not just a loss to the agricultural community. Department of Agriculture studies show that the American consumer ultimately suffers the most significant economic impact through higher prices.

The bill was introduced to offset a policy statement by Secretary of the Interior Cecil Andrus which poses a severe threat to agriculture by radically altering and deemphasizing Federal predator control programs. I feel strongly that the Andrus policy is in direct conflict with both current Federal law and the wishes of Congress as expressed through annual increases in funds for predator control efforts.

We must seriously question a policy, Mr. Chairman, which is based in such statements as:

Before selective lethal control could begin on Federal lands, a threshold of 5 to 10 percent of verified predator losses in particular herds should be reached. Lethal predator control should be conducted only within the immediate vicinity of livestock losses. No buffer zone clearance of predators would or should be permitted.

This committee has information available and will be receiving further testimony regarding details of predator losses, chemical substance evaluations, and other pertinent information. I will therefore not attempt to review such details with you today.

I have, however, contacted several parties in Idaho who have been impacted by such Federal policy proposals including the Idaho Cattlemen's Association. I respectfully request that the comments of the organization be made part of the record.

Further statements will also be provided by representatives of this organization who will be appearing before this committee.

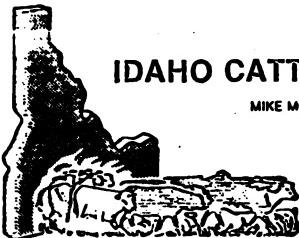
Again, this committee is to be commended for its past efforts to strengthen the agricultural economy and I hope needed legislation can be devised to give necessary relief to the American livestock industry.

Mr. Chairman, as a former member of this committee, I appreciate very much your indulgence. Thank you.

Mr. DE LA GARZA. Without objection, if you will supply for the record the statements which you wish to submit on behalf of your constituents, they will be included in the record at this point. We appreciate them.

Mr. HANSEN. Thank you.

[The attachment referred to by Mr. Hansen follows:]



IDAHO CATTLEMEN'S ASSOCIATION

MIKE MOGENSEN, Executive Vice President

April 8, 1980

OFFICERS
PRESIDENT
Howard Raney Weiser
VICE PRESIDENTS
Robert Swanson Pocatello
David Bivens Payette

Congressman George Hansen
1125 Longworth Building
Washington, D.C. 20515

Dear Congressman Hansen;

We appreciate your letter and copy of the proposed bill HR 6725 - - - addressing Cooperative Animal Damage Control programs between the Secretaries of Interior and Agriculture.

The provisions of this legislation are essential in maintaining a viable predator control policy for the livestock industry. As you know, cattle and sheep producers have worked cooperatively for many years with the U.S. Fish and Wildlife Service to develop an effective predator control program.

However, recent policy changes by the Interior Department have ignored the input from these producers and as a result, outlawed the use of "lethal" control measures such as 1080 and denning of coyotes which have been the main effective means of control in the past.

This legislation would provide the means to maintain these essential practices.

We fully support this legislation and offer any possible assistance in the future on this issue. We also support the woolgrowers in their efforts to maintain an effective predator control program.

Please let us know if we can assist you further.

Also, thank you very much for co-signing Congressman Symms' dear colleague letter on the RCA extension of comment period.

Sincerely Yours,

Mike Mogenesen
Mike Mogenesen
Exec. Vice President

MM/lkc

cc: Congressman Symms
Senator McClure
Senator Church
Ron Michieli, NCA
Idaho Woolgrowers
T.F. Pence, Chairman
ICA F&W, & Env. Affairs Comm.

2120 AIRPORT WAY • BOISE, IDAHO 83705 • PHONE (208) 344-9482

Predator losses in Idaho

Year	Sheep inventory (1000)	Sheep killed by predators (1000)	Lamb crop (1000)	Lambs killed by predators (1000)	Value of predator loss (\$1000)
		(%)		(%)	
1958	1109	8	7	988	30
1959	1170	8	7	990	29
1960	1153	9	8	1010	33
1961	1096	8	7	995	29
1962	1041	12	1.2	927	42
1963	1005	8	.8	889	30
1964	937	12	1.3	761	45
1965	908	9	1.0	751	32
1966	859	12	1.4	725	43
1967	844	8	.9	706	29
1968	844	9	1.1	688	33
1969	870	9	1.0	672	34
1970	840	8	1.0	653	30
1971	828	15	1.8	670	54
1972	780	12	1.5	644	43
1973	707	11	1.6	596	39
1974	684	10	1.5	645	37
1975	595	12	2.0	560	43
1976	536	7	1.3	529	26
1977	503	9	1.8	491	32
1978	536	7	1.3	421	27

1/ Includes estimated number of lambs killed by predators before docking.

Mr. DE LA GARZA. The next witness is Hon. Tom Loeffler, a Member of Congress from Texas, who is a coauthor, and I might say a lead coauthor. He has been very helpful in this endeavor.

Mr. Loeffler is one of the bright new stars of the new Members we have in the Congress from Texas. We are very happy to have you here today.

STATEMENT OF HON. TOM LOEFFLER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TEXAS

Mr. LOEFFLER. Thank you, Mr. Chairman.

Mr. Chairman and members of the subcommittee, I appreciate the opportunity to appear before you today to discuss the future of the animal damage control program.

On March 6 I was pleased to join with the distinguished chairman of this subcommittee in introducing H.R. 6725, the Animal Damage Control Act of 1980, which I hope will provide an opportunity for us to review this critical program and to revise and strengthen a law written in the 1930's.

Mr. Chairman, two aspects of the 1931 Predatory Animal and Rodent Control Act are noteworthy. Not only does the act require that the Federal program control predation in order to protect this Nation's livestock, it expressly authorizes such activities on privately owned lands as well. The impact, then, of Federal predator control policy is felt on farms and ranches nationwide, not merely on those lands presently administered by the Department of the Interior.

Because the Secretary has recently revised the Federal program in what I feel is a strongly detrimental manner, I firmly believe that it is imperative that we take appropriate steps to insure the protection of the country's food and fiber resources from unwarranted losses due to predatory animals.

Livestock loss as a result of predator damage has been a problem of long standing and one of increasingly severe proportions recently.

In 1977 the Nation's sheep and goat industry lost an estimated \$69 million—17 percent of the industry's gross income for the year—due to predation. Predators killed more than 1.2 million head of sheep and goats during 1977 and because of these losses some 290,000 tons of red meat never made its way to American tables.

In addition, the U.S. Department of Agriculture's Economic Statistics and Cooperative Service found that in 1978 American consumers were deprived of more than \$16 million worth of beef because of calves lost to predator attacks.

Texas, as you know, is the leading sheep- and goat-producing State in the country. Yet their numbers have continually declined during the past three decades, in large part due to predator losses resulting in this Nation having to rely on greater and greater quantities of imported products.

In 1978 alone predator attacks were responsible for 58 percent of all losses to sheep and lambs, compared to 25 percent in 1967, and a staggering 72 percent of goat and kid losses in Texas. In each case, coyotes were the largest single cause of death to livestock from all causes in the State of Texas in 1978.

The Texas and Southwest Cattle Raisers Association recently estimated that cumulative losses to predators over the last 12 years have resulted in the loss of more than 250 million pounds of beef.

It is obvious from these statistics that predators are not in conflict with livestock. Rather, they are in fact in direct competition with man for food. Furthermore, over and above this tremendous loss of available food and fiber, these same studies show that the American consumer ultimately suffers the most significant economic impact through higher prices for agricultural goods.

The Federal predator control program, once firmly based on clear statutory authority, has more recently come to be guided by policies which are outlined in conferences, speeches, letters, and memoranda rather than in new legislation or even in binding administrative regulations.

Furthermore, much of the animal damage control policy promulgated during the last several years, including major portions of recent announcements, has been directed by the results of premature evaluations of incomplete and biased data compiled during the late 1960's and early 1970's. Unfortunately, recommendations from these evaluations led to executive decisions to suspend the use of toxicants in 1972 and to severely restrict most if not all of the lethal control measures then in use.

Since 1972 the Federal Government has continued to exercise its power to regulate the use of Federal lands as a means of regulating predator control activities.

Also, additional authorities enacted into law were used in 1972 to cancel the registration of some of the most effective and widely used toxic substances in predator control. The fact that sodium cyanide has been given a clean bill of health since that time underscores the lack of scientific data available to the decisionmakers in 1972, in addition to reinforcing recent statements that compound 1080 remains restricted for purely political rather than scientific or practical reasons after more than 8 years of intensive research.

Other than opposition to the use of chemical toxicants and the utilization of lethal control methods in the conduct of predator control programs, the major criticism of these programs has been the lack of scientific data on the extent of livestock losses due to predators and the ecological effects of various control methods.

However, despite efforts to block such research, until recently ongoing efforts to develop scientific data have been conducted somewhat free of unnecessary and unreasonable governmental intervention. Until a short time ago the U.S. Fish and Wildlife Service, in cooperation with EPA, was conducting a comprehensive examination of compound 1080, proven to be the most responsible, effective, and selective tool known in predator control, particularly when used in the toxic collar.

The Secretary's November decision to halt further research on 1080, notwithstanding recommendations by virtually all professional animal damage control researchers, in my opinion points out a lack of dedication or interest in assuring an objective evaluation of all of the facts surrounding this controversial issue, and a deeper lack of commitment by the Department of the Interior toward insuring the development of an adequate predator damage management program.

I find it further incomprehensible that the Department intends to implement a policy which emphasizes nonlethal preventive methods when the clear intent of the 1931 act was to control and eliminate predator damage of livestock. Moreover, in limiting existing control techniques, already severely restricted by past and present Interior Department policies, to instances when "unacceptably high losses have been documented," the Department exhibits a clear disregard for the current capability to document such losses.

In my view, the losses which livestock producers are presently suffering due to the lack of responsible and effective predator control methods are already "unacceptably high losses."

All of us are keenly aware of the critical importance of maintaining a careful balance between livestock and wildlife. A rancher's very livelihood depends upon the preservation of our ecological system. By allowing the use of proven, effective, and responsible means to control predator damage, while insuring research and development of other viable alternatives, I strongly believe that this legislation reflects the desire of concerned agricultural and environmental groups to resolve this critical problem.

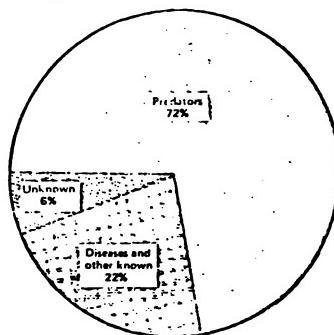
I urge the subcommittee to carefully and objectively review the facts surrounding this controversial issue. I will work with you in any way that I can to insure the development of a sound ADC policy.

Thank you, Mr. Chairman, for the opportunity to appear before you today and for the pleasure of working with you in the introduction of the legislation that we are considering today.

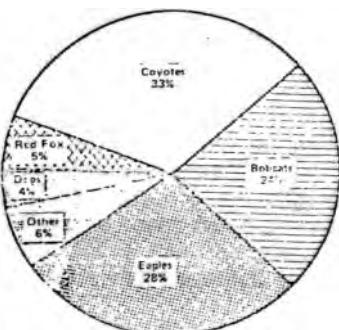
[Attachments to the statement follow:]

ALL GOATS AND KIDS: PERCENT OF LOSSES BY KINDS, TEXAS, 1978

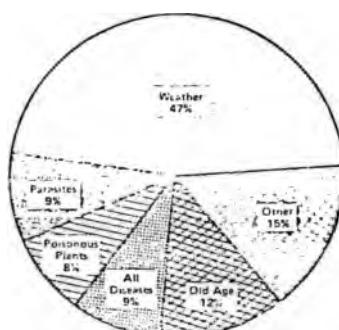
ALL GOAT AND KID LOSSES



ALL PREDATORS



ALL DISEASES AND OTHER KNOWN CAUSES

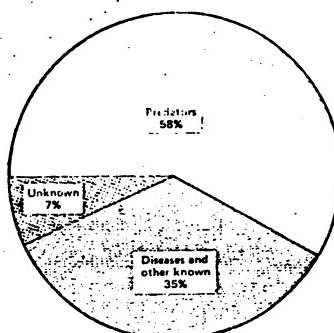


SOURCE: 1979 Texas Sheep and Goat Death Losses and Marketing Practices

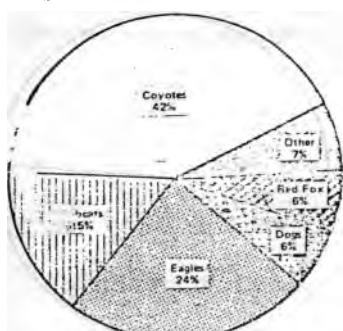
(compiled by Texas Department of Agriculture in cooperation with USDA)

ALL SHEEP AND LAMBS: PERCENT OF LOSSES BY KINDS, TEXAS, 1978

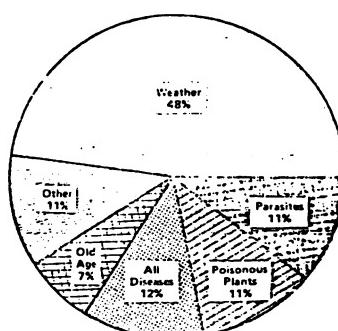
ALL SHEEP AND LAMB LOSSES



ALL PREDATORS



ALL DISEASES AND OTHER KNOWN CAUSES



SOURCE: 1979 Texas Sheep and Goat Death Losses and Marketing Practices

(compiled by Texas Department of Agriculture in cooperation with USDA)

Mr. DE LA GARZA. Thank you, Mr. Loeffler.

We appreciate all of your cooperation and your testimony today.

The next witness is the Honorable Marvin Leath, a Member of Congress from Texas. We welcome you before this subcommittee, Mr. Leath.

Mr. Leath replaced, with his blessing, the former chairman of this committee, Mr. Bob Poage from Texas.

**STATEMENT OF HON. MARVIN LEATH, A REPRESENTATIVE IN
CONGRESS FROM THE STATE OF TEXAS**

Mr. LEATH. Mr. Chairman, I appreciate being here very much.

I want to inform you that just immediately prior to coming over here I had the opportunity to visit with Bob Poage on the phone. I told him that I was about to come over here to talk about coyotes. I feel sure that your chair will begin to vibrate any minute because we will certainly feel his spirit and presence here this morning because this was indeed a subject that was dear to his heart.

Mr. Chairman and members of the committee, it is certainly my pleasure to be before you today to talk about our agricultural programs and specifically the predator control program.

As you know, all sectors of the agricultural industry from producers to consumers are financially hard pressed. On one hand we are seeing rapidly rising prices to the consumer. Food prices rose 10.9 percent in 1979. On the other side we see less income to the producer. Farm income rose only 6 percent while farm production costs for ranchers increased 12.6 percent in 1979.

Therefore, it is all important that we in Government follow through with our congressional mandate of, in this instance, engaging in predator control.

I hasten to point out that if we would but allow the producer the opportunity, he could very easily take care of his own problems. However, as you are aware, the Department of the Interior has severely restricted or eliminated the most efficient and cheapest controls known to the livestock producers.

This can be seen most recently in Secretary of the Interior Cecil Andrus' November 1979 announcement of continued restrictive use of M-44 and aerial hunting and of stressing the increased use of non-lethal methods of control.

Mr. Chairman, to me this makes absolutely no sense, given the costly and in most cases ineffective means Secretary Andrus left to ranchers. What the Secretary of the Interior did was to take away the right of the livestock producer to defend his property and his livelihood.

For instance, in my home State of Texas, it is estimated that livestock producers suffered \$13 million in livestock losses due to predators in 1978. These are dollars that the rancher can ill afford to lose, as I noted earlier in my testimony.

Mr. Chairman, as I understand the intent of this subcommittee, you are holding these hearings to help develop a balanced animal damage control program effectively utilizing lethal and nonlethal control measures. Of course, I am very much in favor of these objectives.

At this time, I would like to include in the record a copy of a report prepared by Professor Ernest Kun on the toxicity of one effective predicide, compound 1080, or sodium monofluoroacetate. As you are aware, 1080 is used in conjunction with collared sheep in order to help control coyote kills of sheep and goats.

A constituent of mine, Mr. Charles Howard, of Meridian, Tex., is currently engaged in a contract with the Department of the Interior to study the effectiveness of the toxic collar and 1080. To date the results have been positive and I feel they will continue to be so. The toxic collar appears to be effective and is very restrictive. Mr. Howard

will be giving testimony tomorrow in greater detail on his results so I will not go into the specifics at this time.

I would just like to say that I am very excited over his results so far as they point toward a balanced control of coyote predation. Certainly, I hope, and I know that you will give him and his test data close attention.

In addition, Mr. Chairman, I would like to include for the record a copy of a Congressional Research Service paper that explains in layman's language what Dr. Kun's findings mean. Briefly, Dr. Kun found that the concern of many that the predicide 1080, a strychnine-based poison, posed a secondary poison hazard was nonexistent. If Dr. Kun is correct, then 1080 may very well be the answer to many of our producers' problems. I would imagine that further testing is necessary to see if Dr. Kun's findings can be duplicated.

This is where the proposed legislation, H.R. 6725, is all important as it will give legislative direction to the Interior Department concerning viable, readily available control measures.

Mr. Chairman, I want to thank you again for holding these hearings. You are to be commended for having the foresight for recognizing the problems faced by the agricultural sector. I have long studied this issue and have found our current programs lacking. This is exactly why I have joined with you in cosponsorship of H.R. 6725.

My predecessor, the Honorable Bob Poage, served with dignity on this committee and was committed to responsive responsible predator control programs. This legislation and the leadership you are providing are in keeping with his earlier work.

Again, Mr. Chairman, I want to thank you for this opportunity to appear before you.

[The attachments referred to follow:]

Fourth (summary) Report on Research concerned with the long range project: development of an antidote to fluoracetate poisoning. (December 9, 1979):

Submitted by Ernest Kun, Professor of Exp. Pharmacology, Biochemistry and Biophysics; University of California at San Francisco, Surge Bldg. 101, San Francisco 94143.

- I. Background and purpose of work. The knowledge of the detailed molecular mechanisms of toxicity of F-acetate poisoning is a prerequisite to the correct evaluation of public health hazards as well as usefulness of this highly potent rodenticide (1080). As shown by this investigator (Molecular Pharmacology 14: 172-184; 1978), the precise mode of action of the toxic metabolite of the non-toxic precursor F-acetate which is (-)erythrofluorocitric acid, is still at an early stage of scientific development, and most of the earlier information in this area is in serious doubt. It necessarily follows that any presently maintained arbitrary formal view in this area based on general textbook information runs the risk of being grossly faulty. Our connection with Dr. D. Balser resulted in a relatively short period of investigation in this laboratory relevant to the basic questions of toxicology of the toxic metabolite of F-acetate: (-)erythro-F-citric acid that was identified by this investigator 10 years ago. This work is presently continued on a purely biochemical level, although it seems imperative to sustain also some applied aspects of this work. Unfortunately as recognized from Dr. Balser's recent letter, support of this work is now prohibited by administrative decision.

This summary report contains:

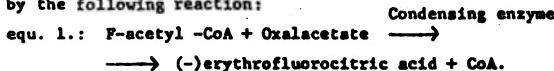
- a.) synopsis of experimental work partly supported by U.S.D.I.
- b.) summary of our present view of the mode of action of F-acetate, including probable basis of species selectivity.
- c.) present avenues of developing antidotes.

II. Summary Report

- a.) Synopsis. 1. Since F-acetate itself is non-toxic, and its lethal action is solely due to its specific conversion to (-)erythrofluorocitric acid (see Kun: Biochemistry Involving Carbon-Fluorine Bond, A.C.S. Symp. No. 28, 1976, p.1-23), we developed a specific enzymatic method for the synthesis of

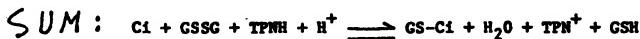
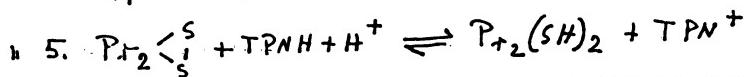
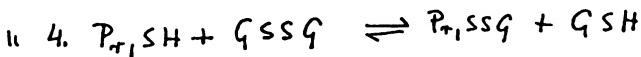
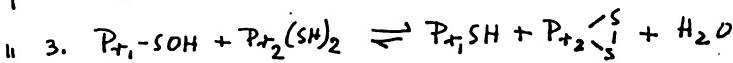
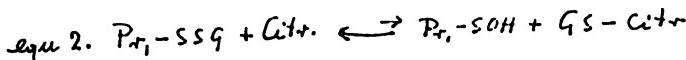
¹⁴C-labelled (-)erythrofluorocitric acid that is to be used as a marker in analytical work concerned with the determination of the in vivo concentrations of (-)erythrofluorocitric acid in lethally poisoned animals. This information: i.e. the determination of tissue levels of (-)erythrofluorocitric acid has not yet been accomplished by anyone (previous reports are doubtful), and our work in this direction is presently halted by the lack of funds. Due to extremely high specific radioactivity of our labelled (-)erythrofluorocitric acid (80-96.000 CPM/n mole) we can detect and monitor picomole amounts which is the range expected in tissues of poisoned animals (for details see First and Second Progress Reports).

Notes: It should be recognized that (-)erythrofluorocitric acid exhibits its unusual potent toxic action only if it is biosynthesized in mitochondria by the following reaction:



If F-citrate were ingested, its toxicity is probably negligible, because (-)erythrofluorocitric acid, after entering cells from the blood stream, is efficiently detoxified by the ubiquitous cytoplasmic enzyme: ATP-cytrate lyase, that cleaves F-citric acid to F-acetyl CoA + Oxalacetate. The minute amounts of cytoplasmic F-acetate after hydrolysis of F-acetyl CoA, formed from ingested F-citrate as present in tissues of F-acetate poisoned animals, is probably not sufficient to produce lethal intoxication especially because (-)erythrofluorocitric acid penetrates only to a limited extent the cellular outer membrane from the blood stream. It follows that consumption of tissues of animals (by other animals) succumbed to F-acetate is unlikely to be harmful, unless the stomach content (which may contain unabsorbed F-acetate) is selectively consumed. F-acetate in decaying tissues is likely to be defluorinated in 5-10 hours to harmless glycolic acid + F-, thus a serious concern about 'epidemic' F-acetate poisoning through poisoned carcasses appears unreasonable. As shown in Progress Report 3, HPLC is a suitable technique to isolate tissue (-)erythrofluorocitric acid (unlabelled) when the labelled external standard ¹⁴C-labelled-(-)erythrofluorocitrate is used to identify the F-citrate containing chromatographic fraction. Analysis of F-acetate itself is most efficiently done by the GLC-MS technique developed in the laboratory at Denver.

b.) mode of action of the toxic metabolite of F-acetate, that is intra-mitochondrially biosynthesized (-)erythrofluorocitrate. Our present work (not supported by U.S.D.) shows that the function of a novel mitochondrial enzyme system that is specifically concerned with citrate transport through the inner mitochondrial membrane is the likely target site of this poison. The molecular mode of action is covalent binding of F-citrate to several critical proteins that participate in this membrane system. The reaction system is shown as follows:



Legend: P_{r_1} and P_{r_2} are protein components of the systems, presently isolated and identified. Arrows = describe enzymatic steps; GS-Ci is the thioester of citric acid that is formed in the membrane and is subsequently hydrolyzed on the membrane surface to GSH and citric acid. GSSG = oxidized glutathione; GSH = reduced glutathione; TPN = triphosphopyridine nucleotide.

(-)erythrofluorocitrate can enter into reaction 2 (eq. 2), whereby F-citryl-S-G is formed that reacts with protein 2 (P_2) at one -SH group and blocks irreversibly the entire path. It can also F-citrylate aconitase, which is involved in the enzymatic generation of TPNH, thus a double block is produced.

Note: Two stages of 'lethal syntheses' are now recognized: First: the formation of F-citrate from F-acetate as originally discovered by Peters; Second: the suicide enzymatic synthesis of F-citryl-glutathione, that is the active F-citrylating agent of at least two distinct membrane proteins in mitochondria.

The ultimate organ toxicity of F-acetate: neurotoxicity is most probably due to the inhibition of mitochondrial synthesis of citrate-dependent cytoplasmic acetylcholine synthesis in specific brain centers. Note: if acetylcholine synthesis can be supported by the generation of cytoplasmic Acetyl-CoA, then F-acetate has no toxicity. This seems to be the case in animal species that appear resistant to F-acetate. It follows that by appropriate enzymatic tests one should be able to predict which animal species are particularly susceptible to F-acetate poisoning. Small rodents (e.g. rats) entirely depend on mitochondrial citrate for cytoplasmic acetylcholine synthesis. This explains their high sensitivity to F-acetate poisoning.

c.). Biochemical basis for the development of antidotes. It follows from eq. 2 that the transfluorocitrylation from GS-F-citr. is the critical reaction for toxicity. We find that a variety of organic disulfides can serve as scavengers for the F-citryl group, and can prevent the covalent binding in vitro of F-citrate to Protein₂. It follows that if after ingestion of F-acetate the poisoned animal (or human) receives organic disulfides that penetrate mitochondria of the CNS, then lethal toxicity should be preventable. Our in vitro work indeed proves that oxidized glutathione can completely prevent protein F-citrylation. Adaptation of these in vitro results to pharmacology requires extensive further work, that is now impossible, at least in our case, having made this project entirely dependent on U.S.D.I. funds.



Congressional Research Service
The Library of Congress

Washington, D.C. 20540

February 22, 1980

TO : Honorable Marvin Leath
Attention: Steve Finoglio

FROM : John E. Blodgett, Specialist
Environment and Natural Resources Policy Division

SUBJECT : Report by Ernest Kun on Research on
Fluoracetate Poisoning

In response to your request, I have reviewed the "Fourth (summary) Report on Research concerned with the long range project: development of an antidote to fluoracetate poisoning" (December 9, 1979) by Ernest Kun of the University of California at San Francisco. Based on my understanding of your needs (as we discussed on the telephone), I have prepared a precis of the report.

Please note that this precis only summarizes the report; no effort has been made to assess the scientific validity of the findings, nor to interpret the findings.

I hope this precis is useful to you. If we can be of further assistance, please call me at 287-7227.

* * * * *

In the background section, the report notes that the precise toxic action of fluoracetate remains uncertain, but indications of the present work are such that "earlier information is in serious doubt." These indications derive from the following:

1. The report says that fluoracetate itself is nontoxic. Toxic action occurs "only" if fluoracetate is converted in mitochondria (components within cells) to the toxic agent, which is (-)erythrofluorocitric acid.

2. Ingesting the toxic agent (-)erythrofluorocitric acid directly "probably" would result in "negligible" toxicity, according to the report, primarily because the chemical only penetrates the outer cell membrane to a limited extent, and also because what does enter the cell will largely be detoxified before it reaches the mitochondria. [This section of the report is particularly dense; this is our best scan.]

3. The report asserts that the amounts of (-)erythrofluorocitric acid remaining in the tissues of poisoned animals would "probably" be too small to poison an animal which ate the carcass.

4. The report notes, however, that the amount of fluoracetate remaining in the stomach of a poisoned animal could be harmful to an animal feeding on the carcass and "selectively" consuming the stomach contents.

5. According to the report, fluoracetate in "decaying tissues" would "likely" be converted to harmless substances in a few (5-10) hours. [It is unclear whether this finding about breakdown of fluoracetates in "decaying tissues" refers specifically to the unabsorbed residues possibly present in the stomach.]

6. The author, Ernest Kun, concludes that it would be "unreasonable" to be seriously concerned about an "'epidemic'" of fluoracetate poisoning through the eating of poisoned carcasses.

7. The report says that the ultimate toxic action of fluoracetate, when converted in the mitochondria to the toxic metabolite (-)erythro-fluorocitric acid, is to interfere with the movement of certain chemicals

(citrates) across the intracellular membranes (within the mitochondria) in nerve cells. This interference, in turn, prohibits the synthesis of chemical (acetylcholine), which is essential to the transmittal of nerve impulses.

8. According to the report, the level of toxicity is affected by the presence or absence in the cells of enzymes capable of synthesizing acetylcholine outside the mitochondria. Knowing about the enzymes in the cells of specific animals, "one should be able to predict which animal species are particularly susceptible to [fluoracetate] poisoning."

9. This preliminary information on the chemical reactions involved in fluoracetate/(-)erythrofluorocitric acid toxicity suggests to researcher Kun that some form of organic disulfide might be developed as an antidote. "Extensive" further research would be required.

Mr. DE LA GARZA. Thank you.

Mr. Leath, may I ask you this. Is the report of Dr. Kun which you mentioned the fourth report of December 9, 1979?

Mr. LEATH. Yes, Mr. Chairman.

Mr. DE LA GARZA. Very well. We had had a request to submit that into the record and your submission will suffice. We appreciate your doing that.

Thank you very much.

Mr. LEATH. Thank you, Mr. Chairman.

Mr. DE LA GARZA. The next witness is the Honorable Steve Symms, a Member of Congress from Idaho.

Apparently, he is not here now. However, if he should not come, without objection, his statement will appear in the record at this point.

The statement of Congressman Abraham Kazen, Jr., of Texas, will also be included in the record at this point. Mr. Kazen is not able to be with us today. Permission is hereby granted to include his statement.

[The prepared statements of Mr. Symms and Mr. Kazen follow:]

STATEMENT OF HON. STEVEN D. SYMMS, A REPRESENTATIVE
IN CONGRESS FROM THE STATE OF IDAHO

Mr. Chairman, I appreciate this opportunity to appear before the Subcommittee in support of legislation to require the Department of Interior and the Department of Agriculture to jointly develop an animal damage control program.

In November 1979, Interior Secretary Andrus announced a revision in Federal animal damage control policy that will ultimately restrict predator control activities on both federal and private lands to the point of severely threatening the survival of the livestock industry. Not only is this in direct conflict with the expressed intent of Congress which has continually voted to increase funds for predator control efforts, it is in defiance of existing law which charges the Department of Interior with controlling predation to protect the nation's livestock resource. Since Secretary Andrus' announcement, I have received numerous letters from livestock industrialists - the National Wool Growers Association, Inc., the Idaho Wool Growers Association, the Sheep Producer/Environmentalist Committee, all voicing their adamant opposition to the Andrus policy. I ask for unanimous consent to include several of these letters in the hearing record.

Livestock loss as a result of predator damage has been a problem of long standing, and one of increasingly severe proportions in Idaho and other Western states. In 1977, for example, the sheep industry experienced a 17% loss in their gross income as a result of predator damage. This represents 32 million sheep at a total cost of \$750 million between 1958 and 1977. Today, the sheep industry appears to be growing at a moderate rate but losses of sheep to predators have kept the figures from rising more substantially. In 1979, total sheep numbers increased 2% - the first increase in 20 years. Had there been a more operative predator control program in effect, this figure would have increased approxi-

, mately an additional 8%. These figures represent a substantial amount of income for the sheep industry, as well as having a marked effect to consumers through increased prices of lamb meat.

H.R. 6725, the Animal Damage Control Act of 1980, will enact more effective and responsible methods to control predators and insure the development of a sound and viable animal damage control program. Not only will this bill allow for the use of existing predator control techniques until more suitable measures can be found, but it also emphasizes extensive research concerning lethal and non-lethal measures to determine their effectiveness in reducing predator damage. Most importantly, H.R. 6725 will finally speak to Congress' mandate in H.R. 9599 of the 71st Congress on March 2, 1931 quoted below:

"The Secretary of Agriculture is hereby authorized and directed to conduct such investigations, experiments, and tests as he may deem necessary in order to determine, demonstrate, and promulgate the best methods of eradication, suppression, or bringing under control on national forests, and other areas of the public domain, as well as on State, Territory, or privately owned lands of mountain lions, wolves, coyotes, bobcats, prarie dogs, gophers, ground squirrels, jack rabbits, and other animals injurious to agriculture, horticulture, forestry, animal husbandry, wild game animals, fur-bearing animals, and birds, and for the protection of stock and other domestic animals through the suppression of rabies and tularemia in predatory or other wild animals; and to conduct campaigns for the destruction or control of such animals: Provided, That in carrying out the provisions of this Act the Secretary of Agriculture may cooperate with the States, individuals and public and private agencies, organizations, and institutions." (Mar. 2, 1931, S. 1, 46 Stat. 1468.)

It is in the best interest of the nation that a strong, effective, balanced predator control program be developed.

Without this legislation, the livestock industry will be in grave danger. And, without this legislation, the economy of our nation will be in danger also. I urge the close attention of the Members of this Body to the testimony brought before this subcommittee. I commend the Chairman's interest in positively addressing this issue which is so important to the health of our sheep industry.

I thank you for your time, Mr. Chairman.

(The attachments referred to follow:)

RECEIVED JAN 1 1979

STEWART CRUCKSHANK, PRESIDENT
PARMA, IDAHOMAURICE CUERRY, JR. VICE PRESIDENT
BUHL, IDAHOSTAN BOYD, EXECUTIVE SECRETARY
BOISE, IDAHO**Idaho Wool Growers Association**

EXECUTIVE COMMITTEE

P.O. BOX 2516

BOISE, IDAHO 83701

PHONE 344-2271

WESTERN DISTRICT
COLIN MCLEOD, JR., CALDWELL
DIRECTOR AT LARGE
HENRY ETCHEVERRY, RUPERT

CENTRAL DISTRICT
LAIRD NICH, KIMBERLY

December 20, 1979

EXECUTIVE COMMITTEE

DIRECTOR AT LARGE
DENNIS BURKS, RUPERT
EASTERN DISTRICT
JEFF SIDDOWAY, ST. ANTHONY
DIRECTOR AT LARGE
EVERETT D'CORRA, TENDOY

Honorable Representative Steve Symms
1410 Longworth Office Building
Washington, D.C. 20515

Dear Sir:

As I'm sure you're aware, Secretary of the Interior Cecil Andrus recently released his proposed Animal Damage Control Program. His proposal is completely contrary to the interests of the Western sheep industry, much less the survival of the industry. It's hard to imagine that Secretary Andrus is even from the state of Idaho. Coming from this state one would think he would have some idea of what affects our industry and the problems we face--especially those inflicted upon us by the Federal Government! Obviously Secretary Andrus has forgotten much during his stay in Washington, D.C.

We would appreciate it if you would write Secretary Andrus informing him that the proposed program is unacceptable, contrary to the professional recommendations of resource managers, and can't be tolerated by the livestock industry.

A letter has been or soon will be coming to your office asking for your signature. This letter will be forwarded to the President asking for his intervention and transfer of the program to U.S.D.A. If the President will not undertake such action, we are requesting that you support legislation to move the program.

In your contact with the President regarding this matter, please make it known that Secretary Andrus has placed his special assistant Cynthia Wilson in charge of the A.D.C. Program in his office. Ms. Wilson has a serious conflict of interest in that position. Prior to her appointment she was a staff person for the Audubon Society, and is presently the Vice-Chairman of the Animal Welfare Institute. Moreover, her testimony is on record at previous hearings stating vociferous opposition to Animal Damage Control programs and an uninformed and inflexible attitude towards the sheep industry.

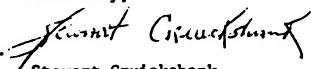
The National Wool Growers Association is currently calling for oversight hearings on the issue. We request that you support our efforts to initiate these hearings. These hearings will be called for by the appropriate House Committee after the first of the year.

The change in the final A.D.C. announcement from what the Fish and Wildlife Service sent to the Secretary and what the Secretary announced was heavily influenced by the Council on Environmental Quality located in the White House. We urge you not to condemn the Fish and Wildlife Service or Assistant Secretary Herbst for the outcome of this proposed policy.

In closing, I would like to point out that sheepmen nationwide are concerned with the potential loss of this Western industry. Such a disaster would mean the additional loss of markets, buyers, mills, pools, packing facilities, health care products and equipment suppliers to name a few. It would open the flood gates of imports and could well reduce the domestic industry to a hobby. We cannot allow this to happen. Sheep have always been considered a war time animal. Producing both food and fiber they are essential to our National Defense.

We thank you for your time and trouble in regards to this issue and look forward to hearing from you.

Sincerely,



Stewart Cruickshank
President

SC:lv

cc: Senator James McClure
Senator Frank Church
Representative George Hansen
National Wool Growers Association
Mr. Laird Noh
Mr. Roscoe Rich
Mr. Warren Ahlstrom, Fish and Wildlife
Governor John V. Evans



University of Idaho
Office of the Dean
Veterinary Medicine
Moscow, Idaho 83843

MAR 31 1980

March 25, 1980

The Honorable Steve Symms
United States House of Representatives
2244 Rayburn Building
Washington, DC 20515

Dear Representative Symms:

SUBJECT: H.R. 6725 ANIMAL DAMAGE CONTROL ACT OF 1980

I was pleased to receive your letter of March 14 concerning your co-sponsorship of the above-mentioned bill. The following comments may be helpful to you in your sponsorship of this bill.

There is a substantial body of evidence to indicate that effective predator control is as important to the maintenance of wildlife populations as it is to the economic well-being of our livestock industry. Some years ago I attended a Congressional hearing on predator control in Sun Valley. At this meeting, representatives of fish and game departments from states in this area presented testimony indicating that predators do have a detrimental effect on game birds, waterfowl, and big game animal populations.

You may recall that in the early 1970's sportsmen in northern Idaho became concerned about the very low elk calf survival rate in the Lochsa-Selway river drainage area. Studies conducted by the Idaho Fish and Game Department indicated that the calf survival rate was indeed very low, on the order of 15-20%, and that predators were killing a large portion of the elk calves in that area. Since predator control has been instituted in that area, the survival rate appears to have improved substantially. In this instance, the principal culprit was the bear. Should you want confirmation of the above information, you might wish to contact the Idaho Fish and Game Department. Studies conducted in Texas and elsewhere indicate that predators take a substantial portion of deer fawns if they are not controlled.

It appears that much of the reluctance to allow effective predator control stems from the belief that predators play a role in maintaining the balance of nature. However, I am sure that you are aware that the principal factor in unbalancing nature is man and that most of the developments in the history of human

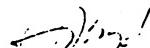
civilization which we have considered progress have unbalanced nature in favor of the human species and have allowed human populations to explode to an extent which mandates that, for the human population to survive at the present population levels, we must continually take actions which will maintain a selective imbalance which favors human survival. The control of predator population numbers at a level which will allow survival of domestic and wild animal species is only a part of this very complex struggle to provide food for humans and the maintenance of wild animal populations, which we see as important.

Many people seem to believe that predators are truly effective in controlling rodent populations. However, there is abundant evidence that this is not the case. If one studies the rodent eruptions which frequently occur and which almost invariably are followed by massive die-offs, one finds that a variety of diseases are the really effective factors in reducing rodent populations once they reach peak levels.

There are also valid public health reasons for keeping predator populations within reasonable bounds. Coyotes are believed to be one of the important vectors of rabies in the Intermountain West. Although we have not experienced sylvatic rabies outbreaks in recent years, if one goes back in time to about World War I, one would find that there was a major rabies epidemic in Idaho in which coyotes played a major role as vectors of the disease. Several years ago, the *Boise Statesman* reprinted an article from an Owyhee County newspaper entitled, "The Year of the Mad Coyote," which described instances of mad (rabid) coyotes attacking farm animals. People were afraid to go out on foot, afraid they might be attacked. Overall, the picture created was one of near hysteria. There has also been some recent research conducted in Texas which indicates that coyotes can be vectors of brucellosis, a serious disease of both humans and cattle.

I hope these comments will be of some value to you. Best personal regards.

Very truly yours,


Floyd W. Frank, Dean
Veterinary Medicine

FWF:bp

cc: Stan Boyd

Stewart Cruickshank

Roscoe Rich

482-7350

The Sheep Producer/Environmentalist Committee

Mr. Laird Noh
Co-Chair
Noh Sheep Company
Route One, Box 65
Kimberly, ID 83341
(208) 733-3617

MAR 14 1980

Ms. Lancy Hicks
Co-Chair
Box 721
Dubois, WY 82513
(307) 455-2293

March 10, 1980

Mr. Lynn A. Greenwalt
Director
Fish and Wildlife Service
Department of Interior
Washington, D. C. 20240

Dear Lynn:

The Sheep Producer/Environmentalist Committee appreciates your response to our resolution on Animal Damage Control and support for the toxicant symposium.

However, your letter expresses a belief that the recent announcement of policy by Secretary Andrus closely approximates the intent of our resolution on animal damage control. This we seriously doubt.

Our resolution stressed the need for greater support of the existing methods of control. The Andrus policy says, "...we must stop relying on old methods which have proven ineffective or are too environmentally hazardous...." Precisely what old methods must we stop relying upon? It is our opinion that aerial gunning, trapping, and the limited use of the M-44 as employed in the Federal program are effective and environmentally sound. Aerial gunning, particularly in winter, offers the only, though limited, technique available to protect sheep in rough mountain terrain. Aerial gunning was offered as the substitute for toxicants when they were banned. Now you are proposing to further restrict aerial gunning.

We believe the preponderance of extensive research and practical experience shows most non-lethal, non-capture techniques to be of limited benefit in protecting livestock. Any ADC program which emphasizes such techniques at the expense of proven environmentally safe lethal methods is fantasy.

What is meant by "target individuals"? In the press release which accompanied the issuance of the Andrus policy, target individuals were defined to include local populations posing an imminent threat to domestic livestock. In the documents issued from the Secretary's Office, particularly where future toxicant use is discussed, there appears to be an effort to more narrowly define individual to those

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individual coyotes which are actually taking sheep.

We have concern about a subjective concept of unacceptable high loss levels as a condition of preventive control. How will such determinations vary from current practical procedure?

We find the decision to refuse to objectively research the questions surrounding 1080 a totally indefensible approach to intelligent, responsible resource management. Unscientific thinking which would ban further research on compound 1080 makes futile research into other promising avenues of coyote management. Should we expect the scientific community to undertake research efforts if administrators deny the scientific validity of their work?

We have other questions about the redirected research policy. Because of the exceptional ability of the coyotes to adapt, we feel that a strong research program is essential to any eventual solution of the animal damage control problems. Such a program is probably essential to even maintain the status quo in protecting domestic livestock. A program redirected toward non-lethal, non-capture methods may be fine, so long as it is not simply a rehash of the research in that field which has already been undertaken. Research in basic coyote-prey ecology and lethal methods should not, however, be downplayed.

There is a body of opinion among our committee that one area of ADC research which has been overlooked is the relationship between buffer species, such as jackrabbits, which provide on a cyclical basis, an alternate food base for coyotes. A better understanding of these relationships might strengthen our ability to predict the severity of coyote predation, and to undertake timely preventative action.

While we have some doubts about the appropriateness of a committee to become involved with research, especially at the expense of an ad hoc committee to review the entire ADC program, our committee would appreciate consideration for representation on that group.

The fundamental premise for the existence of our committee is the value and compatibility with the environment of properly managed sheep grazing. The Andrus policy makes no mention of the importance of this fact, or of the importance of maintaining the social, economic and cultural structure of the West based upon renewable resources. This policy seems to place protecting coyotes above equally important considerations of protecting livestock.

Sincerely,

Laney Hicks
Co-Chair

Laird Noh
Laird Noh
Co-Chair

STATEMENT OF HON. ABRAHAM KAZEN, JR., A REPRESENTATIVE
IN CONGRESS FROM THE STATE OF TEXAS

Mr. Chairman, I wish to join other Members and a host of constituents in the battle against range damage by predators.

Abraham Lincoln once said that government exists to do for people those things which they cannot do for themselves. I can think of no better example than stepping up the fight on the predator enemies of lambs, goats, calves and wildlife. That is why I introduced a bill, H.R. 6733, designed to protect the interests of ranchers, farmers and other property owners by government action that would support their efforts. It is my view that H.R. 6725, under examination today, could make a major contribution to this important cause.

It is very important to farmers and ranchers who lost 32 million sheep in two decades. In 1977, predators' kills accounted for 17 per cent of the sheep industry's gross income. There are hundreds of farmers who have lost goats, and the kill of young deer had seriously slashed the deer population in my District, where many property owners count on hunting leases for important cash revenue. We cannot know what losses there have been in fowl and domestic animals.

I believe your Committee has seen the illustrations in an article printed by Rangemen's Journal in August, 1977. These photographs of a coyote attacking a sheep biting it on the ear to bring it to the ground, and then fastening its teeth on the throat of the sheep until its victim died of suffocation and blood loss. I would hope those photographs could gain the careful attention of those who oppose predator control by man, choosing instead to depend on the "balance of nature" theory. I would ask them whether farmers and ranchers are to bear their losses without complaint, even as we ask them to help provide the food and fiber essential to all our people. In good conscience, I urge that we protect our people first, and that we focus the Department of Interior's attention on animal damage control.

Mr. DE LA GARZA. The next witness is also one of the distinguished new Members from Texas, who represents an area that has a vital interest in this problem. He is the Honorable Charlie Stenholm.

**STATEMENT OF HON. CHARLES W. STENHOLM, A REPRESENTATIVE
IN CONGRESS FROM THE STATE OF TEXAS**

Mr. STENHOLM. Thank you, Mr. Chairman and Mr. Wampler, for extending to me the opportunity to testify before your subcommittee this morning. I look forward to your bringing a bill to the full House Agriculture Committee in the not-too-distant future that we can act upon there.

I am confident that much of the testimony here today will deal with the economic losses caused by predators, primarily coyotes, bobcats, and golden eagles in Texas, to those people now engaged in sheep and goat production.

I would therefore like to talk about one of the biggest losses to our State, a loss that can never be accurately calculated. That is the loss of a potential fiber industry to other areas of the State.

The 17th Congressional District of Texas borders on the sheep and goat area of the State known as the Edwards Plateau. You can practically draw a straight line across the southernmost counties in my district and call anything below that line sheep and goat country and anything above the line no man's land as far as sheep and goat production is concerned.

Let me draw you a mental picture of that area. The four southernmost counties in my district are Mitchell, Nolan, Taylor, and Callahan Counties, with just a small portion of Coleman County. Wool production on the counties in 1978 totaled only 313,000 pounds. At an average of 97 cents per pound, that meant revenues from wool production were \$303,610. Mohair production during the same period totaled only 61,500 pounds and was valued at some \$313,650.

Then, cross over that imaginary line into the next four counties which are located in Congressman Loeffler's District, the 21st District. Wool production in those four counties—for the sake of simplicity I will concede my portion of Coleman in this case—Sterling, Concho, Runnels, and Coleman Counties—totaled 2,462,000 pounds which were worth almost eight times that of the production of the adjacent northern counties. Mohair production was 130,000 pounds and was worth \$663,000, over twice that of my counties.

Geographically there is no reason why sheep and goat production has been discontinued in other areas of the State including the 17th District.

Still another point in favor of increased production in the west-central portion of the State is the running battle landowners face there with wasteful brush species. Goats, in particular, have been proven to be a cost-effective method of controlling certain types of brush, particularly scrub oak varieties, which are difficult to control economically by other means.

With increasing pressures to limit types of chemical brush control methods now in use, I would think more and more landowners would be likely to consider the utilization of goats in a brush control program.

Let us look at the facts: One, mohair, at over \$5 per pound, and wool, at 97 cents per pound, are economically attractive to livestock raisers in parts of the State outside the Edwards Plateau; two, much of the land is ideally suited to increased sheep and goat production; three, making full use of goats can be profitable as a brush control method as well as being economical animal units.

Why, then, does the major portion of sheep and goat production stop at that imaginary line?

It is just not worth the economic gains given the large population of predators in our area. Predators cannot be saddled with the total responsibility for the lack of production, but when a cattle raiser has seen baby calves taken by predators he will certainly think twice before putting baby lambs or goats into the same area.

The sheep and goat industry has been making a comeback in Texas, primarily due to strong wool and mohair prices during the past few years. The Texas wool clip increased 3 percent during 1979 according to the Texas crop and livestock reporting service.

Mohair production was up 15 percent, the largest clip since 1973 when the average price was \$1.87 per pound

The profit incentive is there. The necessary recourses are there. However, the predators are there as well. We do not have an effective efficient means to deal with the problem.

As a cosponsor of H.R. 6725, I believe that this legislation is a step in the right direction toward achieving those necessary controls.

I would emphasize that we are not talking about eradication of any predator species but about a program of predator control for the protection of livestock and wildlife.

I would like to thank you, Mr. Chairman, for giving me a few minutes to present my views on this sensitive issue. With a conscious recognition of the magnitude of the problem we face and with a concentrated effort by all represented here today, I am confident that we can set the stage for a responsible predator control program for Texas and other Western States.

I urge my colleagues to support the passage of such a program in no uncertain terms so that the clear intent of Congress in this matter is unquestionable by future agency administrators.

Thank you, Mr. Chairman and members of this subcommittee, for this opportunity.

Mr. DE LA GARZA. Thank you very much, Mr. Stenholm. We appreciate your testimony.

Without objection, the statements of any members who have not already been mentioned that may be submitted will be included in the record.

I am going to ask the next witnesses if they will appear together since they represent the executive branch. I invite at this time the Honorable Rupert Cutler, Assistant Secretary for Natural Resources, Department of Agriculture; the Honorable Robert Herbst, Assistant Secretary for Fish, Wildlife and Parks, U.S. Department of the Interior; the Honorable Lynn. A. Greenwalt, Director of the U.S. Fish and Wildlife Service, U.S. Department of the Interior; and the Honorable Edwin L. Johnson, Deputy Assistant Administrator for Pesticide Programs, Environmental Protection Agency, to come to the table.

Are you prepared to appear this morning?

Mr. JOHNSON. Mr. Jellineck will be appearing.

Mr. DE LA GARZA. Thank you. I will advise the members of the subcommittee that I am advised that Mr. Greenwalt will appear only as technical advisor and that he has no testimony.

Without seniority or order of importance but simply because we called you first, Mr. Cutler, we will hear from you.

STATEMENT OF M. RUPERT CUTLER, ASSISTANT SECRETARY, NATURAL RESOURCES AND ENVIRONMENT, U.S. DEPARTMENT OF AGRICULTURE

Mr. CUTLER. Thank you very much Mr. Chairman and members of the committee.

I appreciate the opportunity to appear before you to express the views of the Department of Agriculture concerning H.R. 6725, the Animal Damage Control Amendments of 1980.

The bill would require the Departments of the Interior and Agriculture to cooperate and in several instances to jointly develop and carry out an animal damage control program that utilizes both lethal and nonlethal control measures.

The provisions of the bill recognize the need for immediate predator control using existing methods as well as the need for development of more selective methods of predator control to reduce livestock losses while protecting the environment.

We support the concerns expressed in the bill but do not consider its enactment to be necessary because the Departments of Agriculture and the Interior as well as other cooperating agencies already have sufficient legal authorities to conduct animal damage control programs and associated research.

Animal damage control is vitally important to the income of many livestock producers and other farm and forestry operators. USDA's economics, statistics, and cooperatives service estimates that annual losses to livestock producers attributable to coyotes is approximately \$53 million. Recent data show that annual financial losses to the sheep industry alone approximate \$24 million. Losses to consumers attributable to sheep or lamb predation approximate \$4 million. Consumer losses due to calf predation are about \$169 million.

Livestock producers must be able to prevent or control attacks by predators on their flocks and herds. Animal damage control also is essential to disease and insect control efforts.

On the other hand, some persons contend that there is little or no evidence that killing coyotes reduces livestock losses. They suggest that control programs kill nontarget species and are otherwise environmentally unacceptable. Some believe the use of toxicants incurs too high a risk to the environment and to nontarget species. The use of toxicants is indeed controversial.

Because of its economic and environmental advantages, the Department of Agriculture supports and promotes the concept of integrated pest management in all attempts to reduce economic losses caused by vertebrate animals.

The goal of the Department is to reduce damage where animal damage reduction is determined to be necessary for economic reasons and if possible without environmental harm. When direct control is

determined to be necessary we focus control efforts on offending animals, not on the species as a whole.

The Department's animal damage control activities are based largely on the research of the Science and Education Administration and cooperating universities. Current predator control research is focused on fencing, guard dogs, attractants, and repellants.

More extensive, integrated, and coordinated predator control research is needed. Relationships between control techniques, coyote populations, predation losses, and other wildlife should be further defined and assessed. Research should continue on new control methods as well as on more efficient and safe uses of present methods including the use of certain toxicants in heavy predation areas where other methods do not appear to provide sufficient control.

The Department of Agriculture's objective is to develop a safe and effective predator control program for agriculture which is environmentally sound.

We support the concept of using chemical toxicants, including 1080, if not prohibited by other laws or regulations and if they can be used safely without a significant threat to nontarget species and humans. This includes the use of toxic collars where they can be used effectively. However, our goal is to develop and use other alternatives as soon as possible.

We will encourage all research efforts directed toward the development of improved techniques using chemical toxicants to reduce the potential for harm to nontarget individuals and species.

State cooperative extension services provide educational materials and programs on animal damage control for private landowners and managers in every State. The extension programs vary from State to State based upon the magnitude of predation of livestock, crops, and wildlife and the significance of these industries and resources to the economy of the State.

Development of educational programs is coordinated with careful identification of problems, attitudes, and needs of intended audiences. All approved methods for controlling a particular species causing damage are evaluated. Educational materials, techniques, methods, and programs are then developed which incorporate the most practical, effective, species-selective, safe, and humane methods and procedures.

Programs are implemented primarily through the educational systems of county extension agents who provide group demonstrations and group training for producers with damage problems.

On National Forest System lands animal damage control efforts are planned and conducted under the terms of a memorandum of understanding between the Forest Service and the Fish and Wildlife Service. There are also individual agreements with many States.

Any animal damage control activities proposed on national forest lands must be carefully screened and evaluated before actions are approved. Where predators are involved, it requires a thorough documentation of evidence of livestock or wildlife losses and coordination with land and resources management planning objectives for action to occur.

In cooperation with the Fish and Wildlife Service, State agencies, and other interested parties target populations are identified, an environmental analysis is completed, and appropriate control techniques are determined. Actual control methods and their timing are

specifically outlined in a detailed plan which is approved by the Forest Service.

As a result of this tight screening and the evaluation of critical needs, we have found that animal damage control is necessary on only a small percentage of the Forest Service land areas utilized by livestock operators. When a plan is approved, the control measures are conducted under the supervision of the Fish and Wildlife Service or, in some cases, under State direction. The results of control activities are closely monitored by the involved Federal and State agencies.

The Department of Agriculture acknowledges the problem addressed by H.R. 6725 and recognizes the need for a solution to the predator problem that is acceptable to a variety of valid interests. We believe the effective solution is to continue to work toward a balanced program, involving all predator problems and methods of control, utilizing existing cooperative arrangements between the Departments of Agriculture and the Interior.

Mr. Chairman, my associates and I will do our best to respond to questions from the committee. Thank you.

Mr. DE LA GARZA. Thank you very much, Mr. Cutler.

Next we have Mr. Robert Herbst, Assistant Secretary for Fish and Wildlife and Parks, Department of the Interior.

STATEMENT OF ROBERT L. HERBST, ASSISTANT SECRETARY, FISH AND WILDLIFE AND PARKS, U.S. DEPARTMENT OF THE INTERIOR, ACCCOMPANIED BY LYNN A. GREENWALT, DIRECTOR, U.S. FISH AND WILDLIFE SERVICE, U.S. DEPARTMENT OF THE INTERIOR

Mr. HERBST. Thank you, Mr. Chairman and members of the committee. I welcome the opportunity to testify on behalf of Secretary Andrus on H.R. 6725 and H.R. 6733.

This legislation would require the Secretary of the Interior in co-operation with the Secretary of Agriculture to implement certain requirements relating to animal damage control.

Since this legislation does not consider the adverse impact on wildlife resources or the environment, addresses only a portion of the total ADC program, and is almost entirely encompassed in the Animal Damage Control Act of 1931, we must oppose enactment of the bills. Our legislative report, which is being prepared, will analyze the bills in more detail and give our rationale for opposition.

In my statement I would like to develop what we think are the most significant issues: The current ADC program's direction, the continuation of the use of compound 1080, and the failure of the bills to address the total animal damage control program.

Mr. Chairman, this controversy emerges from two basic and unquestioned facts. The first is that predators including coyotes play an important role in the ecosystems they occupy. The basic predator-prey relationships between coyotes and rabbits, mice, and other prey species are complex. In unmanaged situations their populations follow cycles, with reductions in prey species populations being followed by declines in predators.

A balance of predators and prey is often the sign of a healthy ecosystem and is something the Department of the Interior and the Fish and Wildlife Service is committed to protect.

The second fact is that predators sometimes kill domestic animals, in some parts of the country to such an extent that they can be a source of major hardship. At the request of the livestock industry the Secretary directed the Fish and Wildlife Service to conduct a thorough review of our predator control programs.

Following a 21-month review—complete with public input—of the Federal role in controlling damage by predators, the Secretary recently issued a revised policy on the program. We believe it is a reasonable approach to resolve a controversy which until now has seemed to be characterized only by the extremes.

The Secretary's decisions were designed to restructure the ADC program to better assist the sheep industry in reducing losses from predators in an environmentally acceptable manner. He set long-term goals, such as minimizing the use of lethal controls, but he recognized that these goals cannot be achieved until research develops effective alternative methods.

In the meantime, we will continue to employ our short-term strategy, that is, the continued use of present control techniques such as aerial hunting, trapping, and the M-44. These will be used in the most selective manner possible.

The policy also calls for increased field research on both lethal and nonlethal control techniques and the effectiveness of various husbandry practices in reducing livestock losses. This would include further research into scare devices, aversive agents, fencing, and other methods. As new methods are perfected we can perhaps limit or phase out some lethal techniques.

Nonlethal methods will have to be proven to be effective and acceptable before we adopt them for predator management. The expanded effort to test these methods in the field will be an important part of our research program.

The new ADC policy is an attempt not only to update our program but to recognize the realities of the 1980's. One of these realities is that compound 1080 is so controversial and arouses such high emotions that it may never be accepted by a majority of society in any form.

It is true that the Secretary did not accept Director Greenwalt's recommendation to settle the question of compound 1080 once and for all through expanded research. Bear in mind that this recommendation was made strictly from a scientific standpoint. He estimated that it would take no less than 3 to 5 years and would require an additional \$1 million and several permanent full-time personnel to answer the crucial questions about its safety and efficacy.

After considering all sides of the issue the Secretary decided that continuing to study compound 1080 would be a waste of taxpayer's money, and even if its use were to be tentatively approved that decision would almost certainly be subject to long and costly litigation. Instead, it was decided to devote our research funds to seeking another toxicant which is effective and environmentally acceptable as well as studying other methods of control.

The Secretary also discontinued the practice of denning, that is, of locating coyote dens and killing the pups. As you may know, this practice accounts for a small fraction of coyotes killed by the Federal program, but it is a practice which is repulsive to a majority of Americans.

We believe the elimination of denning as a management practice is an excellent decision. The reduction in the program resulting from this directive will have a minimal impact on livestock losses and will make the Federal program more acceptable to the public.

We will, however, take pups from their dens when there is a reasonable assurance that they will starve to death if left there. The pups will only be taken by hand excavation of the den and pups then dispatched by shooting.

The proposed legislation does not supersede or contradict the Animal Damage Control Act of 1931 but merely refers to a portion of the act and provides a more precise definition of the methodology to be employed. This proposed legislation fails to recognize the nonpredatory animal damage control aspect of the ADC program.

The total ADC program includes the protection of agricultural crops from rodent damage, protection of food and agricultural crops from bird damage, prevention and spread of diseases from wildlife to domesticated animals and humans, and the protection of human health and safety, especially with respect to the problem of bird damage to airplanes.

Upon careful examination of the current animal damage control program, including the objectives stated in the recent decision by the Secretary, one soon realizes that most of the intent of the proposed legislation has been incorporated into the program including the formation of an interagency working group and Research Advisory Committee.

The Research Advisory Committee will insure that new ideas are given attention and will oversee the application of research efforts including the drafting of a 5-year research program. The committee will include representatives of the livestock industry, the environmental community, academia, the Council on Environmental Quality, the Environmental Protection Agency, the Bureau of Land Management, the Forest Service, and State wildlife agencies.

The formation of an interagency working group, comprised of representatives from the Bureau of Land Management, Forest Service, and the U.S. Fish and Wildlife Service, will assure that animal damage control activities on public lands are in harmony with other objectives which guide the management of those lands.

Mr. Chairman and members of the committee, let there be no misunderstanding. We will meet our animal damage control obligations as mandated by the Animal Damage Control Act of 1931, the National Environmental Policy Act, and other pertinent Federal statutes as well as the President's 1977 environmental message.

Mr. Chairman, I will submit for the record copies that concisely state the Secretary's decision and outline the implementation plan and the time schedule for the implementation.

With me are Mr. Greenwalt and his staff. This concludes our statement. We will be glad to respond to any questions the committee has.

Mr. DE LA GARZA. Thank you very much, Mr. Herbst. Without objection the material you intend to submit will become a part of the hearing record when you have submitted it.

[At the time of printing the material had not been submitted.]

Mr. DE LA GARZA. We will hear now from Mr. Jellinek of the Environmental Protection Agency.

STATEMENT OF STEVEN D. JELLINEK, ASSISTANT ADMINISTRATOR, PESTICIDES AND TOXIC SUBSTANCES, ENVIRONMENTAL PROTECTION AGENCY; ACCCOMPANIED BY EDWIN L. JOHNSON, DEPUTY ASSISTANT ADMINISTRATOR, PESTICIDE PROGRAMS

Mr. JELLINEK. Good morning, Mr. Chairman and members of the subcommittee. I appreciate this opportunity to discuss with you EPA's views on H.R. 6725, a bill introduced by Chairman de la Garza and Mr. Loeffler.

H.R. 6725 seeks to significantly reduce annual losses of livestock to predator attacks by directing the Secretaries of Agriculture and the Interior to jointly conduct a balanced animal damage control program.

Among other measures, this program would include the use of compound 1080 and other toxicants until more suitable selective toxicants are developed. The bill also calls for research activities on chemical toxicants including compound 1080.

I assure the subcommittee that EPA is in full agreement with the sponsors of the bill on the importance of the U.S. livestock industry. At the same time, we recognize that the industry needs a variety of approved control tools, both chemical and nonchemical, in order to minimize losses of their livestock to predators.

However, EPA's pesticide regulatory mandate, the Federal Insecticide, Fungicide, and Rodenticide Act, makes us responsible for insuring that predator control toxicants, like other pesticides, can be used without posing the risk of unreasonable adverse effects to humans or the environment.

Our role is to evaluate the risks and benefits afforded by various predacides and to allow public use of only those that offer social or economic benefits that outweigh their accompanying risks.

Mr. Chairman, EPA opposes enactment of H.R. 6725 for the following reasons. First, it would mandate the use of compound 1080 and other toxicants without the requirement of a risk-benefit analysis to determine if such predacides could be used without unreasonable adverse effects; second, it would set a precedent for similar actions on other pesticides; and, third, its relationship to the normal misuse prohibitions and other provisions of FIFRA is not clear.

For example, if the bill is intended to set aside FIFRA's registration provisions for predator control toxicants, does it similarly preempt FIFRA's prohibition on pesticide misuse for such chemicals? And would sanctions be available against control program operators who used compound 1080 in a manner inconsistent with Interior-Agriculture approved practices?

Compound 1080's predator control uses and those of strychnine and sodium cyanide were canceled and suspended by EPA in 1972 after the President's Executive Order 11643 banned all use of predator control toxicants on Federal lands.

The Agency's findings at that time was that the three compounds posed unacceptable hazards to humans and other nontarget species, especially considering their typical predator control use patterns. Further, use of the three toxicants for predator control was found to confer only ill-defined and speculative benefits.

Subsequent to the 1972 order several EPA-approved experimental use permits provided for further testing of sodium cyanide. Ultimately EPA's findings on that chemical were modified by the development of new factual information regarding the relative safety and selectivity of sodium cyanide as it is delivered through the M-44 device.

In 1975 sodium cyanide was again registered for coyote control use but in the safer M-44 device. Basically, EPA found that the M-44 is selective for canids and poses only minimal hazards to non-target animals. An effective antidote exists for sodium cyanide poisoning and the experimental use of the M-44 appeared to result in a trend toward decreased losses of livestock to predators.

As this renewed registration action clearly illustrates, FIFRA does embody the flexibility needed to adjust historical regulatory decisions to new biological technological, or economic realities.

During the late 1970's experimentation with 1080 also was conducted by USDI under a series of experimental use permits approved by EPA. From 1977 until late 1979 Interior conducted field tests to evaluate the safety and effectiveness of 1080 used in the toxic collar device to control predating coyotes.

Interior's goal in conducting this research was to gather the type of substantial new evidence on 1080 that is needed under EPA's subpart D rules of practice to support renewed registration of any canceled or suspended pesticide use.

Late last year, as you know, Interior announced its decision not to pursue further research on 1080 for predator control but instead to focus its research efforts on nonlethal control methods and other toxicants that do not pose secondary poisoning hazards and are selective and humane.

To date, EPA has not seen significant new evidence that would support a modification of our 1972 risk-benefit decision against the predator control use of compound 1080. We remain concerned that reintroduction of 1080 as a predator control toxicant could cause serious secondary poisoning and other adverse environmental and human health effects.

H.R. 6725 also directs Interior and Agriculture to conduct animal damage control research using toxicants including compound 1080. As I mentioned earlier, research with 1080 has been conducted by Interior during the past several years under an experimental use permit approved in accordance with section 5 of FIFRA. EPA would cooperate in a continuation of such research.

However, I must emphasize that while the data gathered through such a research program might ultimately be used to support renewed registration of the predator control use of 1080, registration of 1080 would not automatically result from the program.

In accordance with subpart D of EPA's rules of practice, if EPA were to determine that substantial new data had been generated which might materially affect its prior cancellation-suspension order, the Agency would convene a formal public hearing to examine such data. Any interested party would be given an opportunity to take part in the hearing. At the conclusion of the hearings, EPA would determine whether the new evidence on 1080 materially affected the prior cancellation-suspension order and required its modification.

In inviting EPA's testimony today, Chairman Foley of the full Committee on Agriculture asked that we also estimate the cost to EPA that would be involved in implementing H.R. 6725. We do not believe that enactment of the provisions of the bill would have any measurable impact on the cost of conducting our pesticide regulatory program during this or the next 5 fiscal years.

If USDI and USDA were to conduct a cooperative animal damage control program as described in H.R. 6725, we anticipate that the registration and other ongoing activities of our program would simply continue to function as usual.

In summary, FIFRA sets forth provisions for the equitable and scientifically supportable introduction of pesticides into the market and for removal of those pesticide uses that are found after registration to pose unreasonable adverse effects. FIFRA further provides for experimentation with an emergency use of unregistered pesticides, consistent with the overall goals and purposes of the statute.

EPA has developed procedures for reconsidering previous cancellation or suspension decisions so that pesticides which have been removed from use may be reintroduced at some later time if substantial new evidence changes the Agency's previous risk-benefit findings.

Thus, EPA cannot support any legislation which mandates an unregistered and unregulated pesticide's use. An efficient working regulatory system is in place that insures that all pesticides to be used in this country are equally and fairly evaluated against the same unreasonable adverse effects standard.

That completes my prepared statement, Mr. Chairman. I would be pleased to answer any questions you may have.

Mr. DE LA GARZA. Thank you very much. We thank all of you for your testimony this morning.

Mr. Wampler?

Mr. WAMPLER. I wonder if you would tell us something about your background, Mr. Herbst.

Mr. HERBST. Certainly. I have a degree in forestry and one in wildlife. I was an instructor at the University of Minnesota in forestry. I spent 7 years as a practicing forester in the Plumas National Forest, in the Superior National Forest, and in central Minnesota.

I was public relations director for the Division of Forestry, executive director of Keep Minnesota Green, Inc., for 2 years, which position dealt with environmental education, fire protection, and maintenance of the tree farm program. I was deputy commissioner of the Minnesota Conservation Department, acting commissioner of that department for 3 years, and then became the national executive director of the Izaac Walton League.

I returned to Minnesota as commissioner of its newly established department of natural resources and served as its commissioner for 11 years.

I was then selected by the President and confirmed by the Senate as Assistant Secretary of Fish, Wildlife, and Parks for the Department of the Interior. I have had approximately 27 years of professional background.

Mr. WAMPLER. Then it would be fair to say that your credentials are basically those of an environmentalist. Is that correct?

Mr. HERBST. My credentials are those of a scientist, a natural resource manager, and a natural resource administrator.

Mr. WAMPLER. That is why I find your statement almost unbelievable. On page 3 of your statement you say: "It is true that the Secretary did not accept Director Greenwalt's recommendation to settle the question of compound 1080 once and for all through expanded research."

As one who, I assume, has some appreciation of scientific reasoning, why in the world did you not let disinterested people, people who could truly question accepted methodologies, research the issue rather than making a political decision? It looks to me as though it was made solely on the basis of what you perceived to be sound public policy in the political realm rather than in the scientific realm.

Mr. HERBST. The Secretary made the decision himself, personally. The Director recommended that we complete the research to answer the questions once and for all and estimated that it would take from 3 to 5 years at the costs and manpower that I indicated to you.

The Secretary felt that it was a waste of money to continue the research, that even after that period of time if the answer were favorable the litigation would be such that the process would be drawn out for such a period of time that use of 1080 would never come about. So, that was the decision the Secretary made.

Mr. WAMPLER. What recommendation did you make?

Mr. HERBST. I made a supportive recommendation of the Director.

Mr. WAMPLER. I commend you for that.

Let me just say that if Congress were to legislate on the fear that whatever we did was going to be litigated, we would never get anything done here. Most of what we do here at one time or another is subject to litigation. I think that is contorted thinking.

It is sound public policy to submit these very complex questions to sound scientific determination. Unless you do that, I think you have missed a great deal of what your responsibility is. It is to try to let the scientific community tell us what the facts are and then let the regulators and politicians make decisions on the basis of sound scientific judgment, not on the basis of political judgment.

Mr. HERBST. I would point out to you, Mr. Chairman and Mr. Wampler, that the Secretary's decisionmaking process is one in which he addresses and takes into consideration scientific advice, legal advice, economic advice, and the other types of advice which he must examine in order to make a decision. He felt that research had been continuing since 1972, that no favorable answer had come about, that another 3 to 5 years of research optimistically was about to take place at the kind of costs involved, and that we ought to move and strengthen our research in the areas of finding answers that would be more acceptable and possible.

Mr. DE LA GARZA. Will the gentleman yield?

Mr. WAMPLER. Yes, I yield.

Mr. DE LA GARZA. I want to be sure I understand Mr. Herbst's statement. You say that you supported the recommendation of the Director, Mr. Greenwalt. Is that correct?

Mr. HERBST. The process in the Department for making decisions is for an agency Director to make his recommendations to his or her respective Assistant Secretary, which in this case was a recommendation from the Director to me.

Results or answers posed by the two research recommendations (2, 3) may be realized in no less than 3-5 years and would require an initial additional \$1 million over the FY 1979 level and 13 permanent full-time personnel.

One of the key issues relating to the control of depredating animals concerns the use of toxicants. One view holds that all toxicants should be done away with and that other alternatives --preferably non-lethal-- be developed. The livestock operators feel strongly that some kind of toxicant must be developed and used in a rational way. Provided that research results conclude that Compound 1080 offers the brightest promise as the "toxicant of choice" and can be registered through EPA, an additional requirement prior to use in a Federal program, would be an amendment to Executive Order 11643.

Major questions to be answered through research include; is it as efficacious/harmful as presently perceived; can it be made acceptable under the law; does it or some other toxicant meet the needs of an effective animal damage management program?

Other toxicant research should be conducted as a practical question and to lay to rest the continuing question about the availability of a selective, target specific toxicant or toxicants that can be used in some rationally applied way in those circumstances when demonstrated need for control permits the use of no other method.

3. I recommend that applied field research be initiated on non-lethal control techniques and the effectiveness of husbandry practices in reducing livestock losses under various field conditions.

This research should be conducted, as with some toxicants, to provide answers to the continuing questions regarding the effectiveness of the techniques. In order to carry out a responsible program, we must know the full array of the most effective techniques available, i.e., scare devices, aversive agents, fencing, increased use of herders, etc.

4. I recommend that preventive control be continued in those instances when other techniques have been found to be ineffective or impractical

The question of preventive control is a major one. Preventive control implies the control of coyotes in areas frequented by stock, or about to be used by stock and which are noted for their history of depredations. In short, using controls before the coyotes and their prey come together and a problem results.

Preventive control is effective in certain instances, and is clearly sought after by many operators who perceive this as a solution for them. However, prior to initiating preventive control every effort, i.e. extension, nonlethal noncapture, husbandry practices, etc., to reduce the conflict problem should be employed where practical.

One obvious solution to the problem of high predation on public lands is to discourage grazing on those areas susceptible to extreme high rates or to redesignate those areas to other uses. Where this is a practical approach, it is clearly a desirable course of action. In those circumstances where this is not practical, activities will be conducted that will recognize and uphold the values important to all Americans to the maximum extent possible, and be compatible with multiple-use and sustained yield principles.

5. I recommend that, in accordance with the President's 1977 Environmental Message, the following definition of "offending animal" be adopted: The individual or local population causing damage or posing imminent threat of damage to human health and safety, other wildlife, and forest, range and agricultural practices.

I support the Presidential directive that recognizes "the importance of the role that predators play in various ecosystems" and that "if control is necessary it should focus on the individual predators causing the problem-- not the species as a whole. However, I am reluctant to conclude that the individual culprit must be identified before lethal control activities can be employed. Knowledge gained through research will be used to establish reasonable standards as to further identification of offending animals.

We are not opposed to the idea that losses to predators must be established prior to conducting predator damage management. The exception to this premise would apply in the circumstances described above in the use of preventive control.

6. I recommend that denning, as a management practice, be eliminated.

The elimination of denning as a management practice could be accomplished with minimal affect on livestock losses; it should be pointed out, however, that humanness may require the taking of denned pups in those instances when a lactating female has been found to be an offending animal and is taken as such.

7. I recommend that the role of extension be expanded.

A greater emphasis on extension will be accomplished through renewing the Memorandum of Understanding with USDA, increased self-help efforts (demonstrations), increased cooperation with land grant universities and county extension agents and as a means to disseminate information on new or different techniques available for animal damage management.

8. I recommend that the Assistant Secretary, FWP be directed to provide a penetrating review of the program by an ad hoc body.

The conduct of the program will deserve continuing scrutiny and such oversight will be demanded as a political reality. This ad hoc body, made up of the affected interests and others who have a

stake in predator management, would conduct such a review at the end of the first, third and fifth years of the new program. This body would be charged with the responsibility for assessing the program and its adherence to the new policy, and the development of recommendations for change in that policy, based upon the results of the review. Thus a set of mid-course corrections could be developed at least twice during the first five years of the new effort.

9. I recommend that a program goal be to achieve a direct operational program funded solely from Federal appropriations within 10 years.

A major effort to restructure the funding base of the operational program should be undertaken. At present the operational effort is funded by a mixture of Federal appropriation, State appropriation, a "head tax" on livestock and other sources, in varied mixes. The FWS personnel in charge of the program have always been intimately involved in the development of the non-Federal budgets for the program, often at the ground level (i.e., seeking funds from operators to supplement other funds to carry out a full program). This has always made it virtually impossible for the Service field personnel to support any variation of the program aside from what the local operators want — the field person is in an untenable position of having to provide a control program in keeping with the funding available, whether it is an appropriate program or not. The possibilities of perpetuating archaic or unnecessary work are obvious.

The contributions of States and local groups --including growers-- should continue, but be devoted to extension, research and improved husbandry methods, thus finally eliminating the vested investment structure that has contributed to an inability to make fundamental changes in the animal damage management program over time. The details of such a plan remain to be worked out, but the objective should be to have all operational animal damage management funded by the Federal government so long as it is responsible for the program.

The recommendations made above would result in some important changes in how FWS animal damage management is conducted and supervised. It is estimated that these changes will require an additional \$5 million initially for Operations (increased extension activities, additional manpower required for emphasis on corrective control and selective control methods and supplies and equipment) and \$1 million for Research for a total of \$17.2 million in FY 1980. An additional increase of 81 permanent full time positions would be required.

I believe that these recommendations will satisfy most people on both sides of the issue and still allow for an effective animal damage management program. Given the funding personnel, and acceptance of these recommendations, it is also believed that livestock losses and the adverse effects on wildlife would decrease. It should, however,

be pointed out that the results or benefits of the new program, especially those concerning research, may not be measurable in the immediate future.

It is clear that no simple solution to the overall question of animal damage management policy can be developed. It will require a mix of approaches, tailored to the place, topography, and time of year; embodying the policy that a greater emphasis be placed on corrective control and selective control methods. There is also the need to communicate the understanding to all parties as to the role and value of predators when they are properly managed so as to play their essential role in the environment.

A handwritten signature in black ink that reads "Lynn H. Greenwald". The signature is fluid and cursive, with "Lynn" on the first line and "H. Greenwald" on the second line.

Mr. WAMPLER. Finally, Mr. Chairman, let me just say that I have been concerned, as a member of this committee for a goodly number of years—and I do not single out the Fish and Wildlife Service or the Department of the Interior because it applies equally to the Department of Agriculture, the Environmental Protection Agency, and other regulatory agencies of Government—that in trying to interpret and carry out the mandates of Congress, I feel, in all too many instances you are bending science.

You are not turning to the scientific community that could provide many of the sound answers to the problems that we are probing today in trying to find workable solutions. I think every member of this committee is concerned with the legitimate effects of the use of chemicals and pesticides have on the environment.

On the other hand, we have some responsibility to the American people to assure them an adequate supply of food and fiber at prices that the working people in this country can afford to pay.

Mr. Poage, the former chairman of this committee, once said in commenting upon a subject very similar to what we are discussing this morning, that in the minds of some the whale or the coyote is more attractive than a lamb chop on the table that can be eaten at a price that people can afford to pay.

Here are the two extreme viewpoints on this matter. I think there is a better way to proceed. I cannot find words strong enough to condemn the Secretary of the Interior for failing to turn to the scientific community to help find the answer.

I do commend him for having in mind sound management and economy, but, as I understand your statement, he is going to go into another area of research where there may or may not be some hope of finding an answer.

I believe, Mr. Chairman, that you are right. We ought to have the Secretary up here. If this is a political decision—and he has every right in the world to make a political decision—let us let the American people know that it was made on the basis of his conception of what was sound public policy, whether it is political, environmental, economic, or whatever it might be.

He is absolutely turning his back on people who are in the position to give us a scientific answer and to me it is incomprehensible.

Mr. HERBST. Mr. Chairman, let me comment. The Secretary did not turn his back on that. He did take the scientific facts to date into consideration but he also took economics and the side effects, or potential side effects, of the use of the chemical into account.

I am authorized to speak for him. I have outlined for you the reasons why he made the decision. Those are the reasons.

Mr. WAMPLER. I thank you for saying that. Of course, I think the Secretary is the person of whom we should ask these questions for the record.

Mr. HERBST. I would also point out, concerning your comments on the importance of food on the table, that the Secretary certainly agrees with that but he has, in addition, other responsibilities, including the responsibility for the effects on the environment and the effects on other species. So, he does have a balancing role to achieve.

It is his opinion that the program has not been hampered and that it will continue. We will carry out the mandate of the Animal Damage Control Act of 1931, but it must be done in a balanced manner.

Mr. WAMPLER. That is exactly what I am trying to get at. I think that is what most of the witnesses that will appear here are trying to do. We do not think you are doing that, quite frankly.

Mr. HERBST. Well, it is a difference of opinion.

Mr. WAMPLER. Absolutely. This committee has a responsibility and we are attempting in a reasonable way to find some resolution to this problem, and here you are objecting to the enactment of this legislation, as other witnesses are this morning.

I think it is about time that Congress started directing the bureaucracy to come up with some answers to this problem and not continue to delay workable solutions.

I do not think there is a reasonable person that would say that we can live in an absolutely risk-free society. At some point in time we are going to have to start looking at the economic ramifications of some of the regulatory decisions that are being made and achieve a balance. I think that is what this subcommittee is attempting to do.

If you are going to come here and oppose everything meaningful that we are trying to do, I do not think we are going to reach that resolution. That is the purpose of these hearings, to try to find some ways and methods for reaching a resolution and a solution to these very perplexing problems.

They do not have simple answers. Otherwise, I am sure they would have been disposed of.

That is my point and I hope you will give some consideration to the economic impact of your decision and what it is doing to the livestock sector of this country.

My purpose in asking you your professional background was not intended to embarrass you. I apologize that I did not know.

From your own recitation, it is obvious that you have had no experience in the livestock industry, although I assume you have been on ranches and farms in carrying out your duties.

Mr. HERBST. I appreciate your comments. I commend you on trying to find a balanced solution. It is most difficult to do, as you well understand.

We believe that the Secretary has done that.

As to my background, I do not apologize for it at all. I am very proud of it. In terms of whether or not I have had any experience with farming, I can tell you that some of my family does now farm and I do own a farm myself.

I have had personal experience with the animal damage control program as a State administrator, both in the timber wolf area and in the control of coyotes as well as in the control of gophers, rodents, and many other species for a number of years.

Mr. WAMPLER. I am glad. I again commend you for your recommendation to the Secretary. I want to publicly do that again as I did earlier. I think you recommended policy that is much sounder than that which the Secretary finally decided upon. Thank you, Mr. Chairman.

Mr. DE LA GARZA. Mr. Marlenee?

Mr. MARLENEE. Mr. Chairman, I appreciate the opportunity to appear here with this committee; although I am not now a member, I am an ex-member of this subcommittee.

Mr. DE LA GARZA. We are always happy to have you.

Mr. MARLENEE. Thank you. I will present some testimony, with the chairman's permission.

Mr. DE LA GARZA. That permission has already been granted.

[The statement of Mr. Marlenee appears on p. 72.]

Mr. MARLENEE. All the flowery language about facing decisions on the basis of scientific evidence is somewhat contradictory to the statement of the Secretary. Both Guy Connolly, who is with the U.S. Fish and Wildlife Service in Denver, and Mr. Greenwalt have recommended otherwise as far as the use of 1080 is concerned and as far as continuing to study it is concerned.

The Secretary himself said, "I did not accept the recommendation of the Fish and Wildlife Service Director, Mr. Greenwalt, to settle the question 1080 by an expanded research program." He questioned that it would take from 3 to 5 years to answer the crucial questions about its safety and efficacy.

"I believe, however, that compound 1080 is so controversial that continuing to study it is a waste of taxpayer's money." That does not sound like a decision made on the basis of scientific evidence.

I am impressed, Mr. Chairman, with the level of the troops that have been marshaled against this bill. It is like all of the generals in the war in the West seem to be here before this committee.

Mr. HERBST, I am sure that you do not appreciate, if you do own a farm or if you do have a suburban home, the neighbor's dog running through your yard, digging in the flower bed or relieving itself on your trees and shrubbery, and you must concede that the Federal Government does own a great deal of land in the West. Does it not?

Mr. HERBST. Yes, sir.

Mr. MARLENEE. Do you advocate that the predators that roam this vast area of Federal land, 40 percent of my State, be allowed—if you want to term them that, they are your predators—to roam onto neighbors' land, the State land and the private land, that adjoins you? Do you have any plans to control these animals?

Mr. HERBST. The answer to your question, Mr. Marlenee, was in my statement. It was that the issue is twofold. One is to maintain the balance of the ecosystem. The other is to control selectively those species that are causing the problem.

I indicated in the conclusion of my statement that it is the intent of the Secretary and the Department to selectively control predators where they are causing economic hardship and a problem. We have no objection to that.

Mr. MARLENEE. Might I, at this time, read to you a letter from the U.S. Department of the Interior, Bureau of Land Management, to Mr. Seyler, who is in charge of the Montana Department of Livestock, Predator Control Division.

It says:

DEAR MR. SEYLER: The request by the Montana Department of Livestock for aerial hunting of coyotes by Robert Schellinger is not authorized.

Losses of one calf each, reported by Leonard Urick and Dale Carpenter, do not demonstrate a need for control. Of paramount concern to the Bureau are large numbers of mule deer and elk wintering on these areas. Predator control activities

in this area employing the use of a helicopter would cause excessive disturbance of big game, resulting in depletions of energy reserves and possible—

I did not know you were part of the Energy Department—and possible reductions in natality.

Sincerely,

JACK A. MCINTOSH,
District Manager.

Does this sound to you as if you are addressing the problem of individual predators?

Mr. HERBST. The—

Mr. MARLENEE. Excuse me, Mr. Herbst. This is the kind of thing that gets to us out there. It really is causing a revolution out in the West among people that border public lands and have to use public lands.

This kind of attitude and lack of commonsense is what makes them mad when we do want to control some predators.

The question, to me, does not appear to be simply 1080 but a question of killing any coyotes whatsoever.

Mr. HERBST. Congressman Marlenee, the program is to control predators where there is a documented loss or a documented problem. The record of the Fish and Wildlife Service in the animal damage control program has shown an increased number over the past several years in the number of animals that have been killed.

Certainly, there is no attempt to eliminate all of the predators or to eliminate predators that are not causing a problem, but there is an attempt to focus attention in an environmentally acceptable manner and to control those animals that are actually the offenders.

Mr. MARLENEE. Here they have used two very lame excuses. One was the natility of the deer and elk populations and I wonder if the people that wrote this letter ever considered that coyotes do kill fawn and young elk.

Mr. HERBST. Mr. Marlenee, I am not familiar with that particular letter or that particular case, but certainly the Director, myself, and staff are aware of the fact that predators kill other forms of wildlife just as they do domestic species.

Mr. MARLENEE. Is there any evidence to indicate that the number of predators have increased in the West or that predator losses have increased?

Mr. HERBST. I am sure that there are areas of the West where predator damage has increased and predator populations have increased, just as the number of animals that have been taken under the control program have increased.

Mr. MARLENEE. Mr. Chairman, my time has expired.

Mr. DE LA GARZA. Mr. Herbst, I appreciate your position.

As we stated, in order to get the facts in this matter, we are going to respectfully invite the Secretary to appear later.

I did want to ask you a couple of questions since I think you probably had some input into the formulation of your statement. One question is that you state that the Secretary's decision eliminates denning. Then, there is an utterly unbelievable—you people up there

are trying to play God, it seems—statement that “when there is reasonable assurance that they will starve to death” they will be taken out by hand and shot. How you can point with pride to that and consider it environmentally acceptable is beyond me.

Mr. HERBST. I think the indiscriminate use of denning when it is not needed is what the Secretary has objected to and the bulk of the American public has objected to.

The removal of cubs that are starving and the shooting of them is a humane removal.

Mr. DE LA GARZA. I do not agree with that, very respectfully. Who makes the decision that there is a reasonable assurance that they will starve to death? Who makes that decision?

Mr. HERBST. It is the manager or control officer that is responsible for the program on the ground.

Mr. DE LA GARZA. On the basis of what criteria does he decide that?

Mr. HERBST. The criteria will be developed by the Department and published on May 15.

Mr. DE LA GARZA. You say “will be developed,” but they have been doing it right along. I know of zoos that want them.

Do you know that the people who are out there complaining, the people who are having damage done to their livestock, will not shoot a pup. I come from that country.

Yet, you, the saviors, go out and dig them up when somebody says they might starve to death. That is not compatible with what you tell me, in the rest of the statement, what you are trying to—not at all.

Mr. HERBST. Mr. Chairman, it occurs when the female has been taken in the control program. The Department is not the savior but is the administrator of a program that has been mandated by Congress.

Mr. DE LA GARZA. Congress did not mandate at all what you are doing out there. You are taking it completely out of the spirit, the intent, and the letter of the law. Let us make that clear.

Mr. Marlenee?

Mr. MARLENEE. Mr. Herbst, you made a statement about humanness. Do you consider it humane to see a half dozen sheep running in wild disarray, some of them dragging their guts, and others hamstrung? Is that humane?

Mr. HERBST. Of course not.

Mr. MARLENEE. Would your people go out and shoot those sheep? Or should some of our people who are trying to raise a flock?

Mr. HERBST. Sheep are not wild species.

Mr. MARLENEE. They find it almost unbearable to have to go out there and shoot their own animals.

Mr. HERBST. So do I. We are not responsible for the management of domestic species. We are responsible for the management of wild species.

Mr. DE LA GARZA. Do the proposed regulations provide for some system for placing the pups in some acceptable place so that they will not be predators if they need to be taken out of the area?

Mr. HERBST. No, Mr. Chairman, they do not at this point.

Mr. DE LA GARZA. I have no further questions of you, Mr. Herbst. Are there any further questions for anyone on the panel?

Mr. Wampler?

Mr. WAMPLER. Most of the questioning and comments this morning center primarily around the coyote. I assume there are other types of predators.

Mr. Greenwalt or Mr. Herbst, can you tell me how prevalent a problem of predation there is with the eagle in this regard?

Mr. HERBST. I will turn it over to the Director for comment, but, yes, as I said in my statement, we do have other predator problems—rodents, eagles, other predators of all types. We have programs for them as well.

Mr. WAMPLER. My reason for asking you is this. It would be fair to say, would it not, that the eagle more nearly approaches an endangered species than is the case with the coyote? Would that be a correct statement?

Mr. GREENWALT. The bald eagle is rarely a serious problem on livestock and is an endangered species in most of the United States outside of Alaska. The golden eagle, which is the dominant predator among the eagles, is not in any situation bordering on threatened or endangered at present in the United States.

Mr. WAMPLER. Let me ask you, if you can answer this, since the issuance of the Executive order of 1972, what has happened generally to the coyote population? Has it increased and if so, substantially?

Mr. GREENWALT. Coyote populations have done two things. Whether it is as the result of the Executive order or not I cannot tell you with authority. In some parts of the country the populations have increased and I suspect, at least at the local level, substantially.

Coyotes have also enlarged their range so that they are present in some numbers in parts of the United States where they were never formerly encountered.

The coyote is a most adaptive and ubiquitous animal. It can survive with ease in a variety of situations.

I am not prepared to comment categorically on the overall population of coyotes. We do know that the population has increased in certain parts of the country and has remained stable in other parts of the country.

It is subject to fluctuations in accordance with its food base. As I said, one of the interesting things that has occurred with this extraordinary animal is that it has extended its range considerably throughout the United States.

Mr. WAMPLER. As a layman, would it be fair to say that the coyote is a rather resourceful, prolific animal?

Mr. GREENWALT. It is resourceful. If the circumstances are right, that is, if it has a strong food base, then it is certainly prolific, as are most animals of that kind, predators in particular. If the food base declines, then its reproductive rate declines somewhat as well.

It is extraordinarily resourceful, Mr. Wampler, and is one of those remarkable of nature's creatures who will probably survive when few else of us of nature's creatures have survived.

Mr. WAMPLER. Again, this is from a layman's observation. Apparently, a great deal of the public hue and cry that has been raised about the coyote gives the impression that it is going to become an endangered species or would be a good candidate for an endangered species

determination if we had any type of effective predator control program directed at the coyote.

Would it be fair to say that because of the presence of the coyote where traditionally it was not known, it is because we have an effective predator control program such that its population has increased and it would go into areas where there is not such a program?

Mr. GREENWALT. No; I do not think that would be biologically sound. However, the coyote, as you pointed out, is extraordinarily resourceful and will go where it is appropriate and easy for him to live.

I am advised that the population of coyotes throughout the country, as best we can ascertain it, is about the same as it was in 1972 but has fluctuated markedly. During the upward fluctuations—increases in the population—it may well expand its range.

It does live very readily with man, as I am sure all of you know, and so has no problems associating with man and his works. The presence of coyotes, in Maine or in West Virginia, for example, should be no surprise to anyone because coyotes can live in those areas very well.

Mr. WAMPLER. Mr. Greenwalt, I know you are here this morning in the capacity of a technical witness, not a policy spokesman for the Department of the Interior or the Fish and Wildlife Service, but I just want to commend you for the recommendation that you made to the Secretary, you and your professional associates.

I have not always agreed with the recommendations of the Fish and Wildlife Service on a variety of subjects, but I do commend you here because I think that you were making an honest effort to turn to the scientific community to try to find an answer to this very perplexing, highly emotional problem.

Again, I feel that if we are ever going to find workable solutions to problems of this nature, where else can we turn but to the scientific community to provide the answers? They are not without their limitations, but I think that is the proper arena to which to submit problems of this nature so that they can make a recommendation or a summary of their findings, and then let those who are directly involved in the regulatory process and the political process, at least, give that fair consideration.

Again, I want to commend you as a professional for the recommendation that you made. I think you were moving in the right direction. At another time, perhaps, we may have the opportunity to discuss this with the Secretary of the Interior to see what were the compelling reasons that caused him to reverse your recommendation and that of Assistant Secretary Herbst.

I appreciate it very much.

Mr. GREENWALT. Thank you, sir.

Mr. DE LA GARZA. Mr. Greenwalt, may I ask something concerning the statement of Mr. Herbst? It says that aerial hunting is still being carried out. Is that by helicopter or by fixed-wing plane or both?

Mr. GREENWALT. Both, sir.

Mr. DE LA GARZA. Have you had any loss of life in that endeavor?

Mr. GREENWALT. Yes, sir. Quite recently two men lost their lives in coyote control with fixed-wing aircraft in New Mexico.

Mr. DE LA GARZA. Is this done by shooting from the air?

Mr. GREENWALT. That is correct, sir.

Mr. DE LA GARZA. Is it done by high velocity bullet?

Mr. GREENWALT. No, sir. It is usually done with a shotgun.

Mr. DE LA GARZA. That means that the plane has to be less than 50 yards from the target. Is that correct?

Mr. GREENWALT. It is a relatively low altitude, in this case, less than 100 feet, sir.

Mr. DE LA GARZA. Sometimes this occurs in relatively mountainous and rugged terrain, does it not?

Mr. GREENWALT. We usually do not permit fixed-wing aircraft to operate in mountainous terrain. The accident, to which I refer, occurred in rolling hills with some brushy terrain.

Mr. DE LA GARZA. When you mention trapping, do you mean steel claw traps? What kind of trapping do you mean?

Mr. GREENWALT. The steel-jawed trap is the one most often used in predator control, particularly where coyotes are concerned, although the Service and others do use snares and other devices.

Mr. DE LA GARZA. What are the criteria for placing the traps?

Mr. GREENWALT. I am not sure I comprehend precisely what you mean, Mr. Chairman.

Mr. DE LA GARZA. Where do you place them and how?

Mr. GREENWALT. The fundamental effort, and one that can be made with extraordinary effectiveness by a good trapper, is to place the trap in such a way that it will take the animal that is likely to be affecting a herd.

Let me explain quickly that a trapper with reasonable training and a certain amount of experience can identify with, as I say, remarkable accuracy where the coyotes are approaching a herd of sheep or goats and can place traps in such a way that most probably it will take an offending animal, a coyote, as opposed to, say, a cow wandering by. The animal causing the problem is very quickly removed.

Mr. DE LA GARZA. That means that the professional trapper wants to be selective and to get only the offending animal. Is that correct?

Mr. GREENWALT. The professional trapper is instructed to be selective and to, insofar as possible, get the animal that is in fact affecting the herd.

Mr. DE LA GARZA. So, what we need is a system that would be quite selective and environmentally acceptable. Is that right?

Mr. GREENWALT. That is absolutely correct, sir.

Mr. DE LA GARZA. When you speak of trapping, the M-44, and aerial hunting, is that on private and public lands, or only on public lands?

Mr. GREENWALT. The involvement of the Fish and Wildlife Service means that the use of aerial hunting, the M-44, and steel traps is applied both to private and public lands, insofar as Federal involvement is concerned.

Mr. DE LA GARZA. What is the Federal involvement on private lands as far as financing aerial shooting of predators is concerned?

Mr. GREENWALT. Federal financing is supplemented in most States by assessments made against the herd, or taxes imposed by the county, or funds made available by the State involved, that provide for an enlarged and expanded program based primarily on the idea of the growers making a contribution to the basic Federal program.

Mr. DE LA GARZA. Is this done at the request of the landowners at all times, or are there exceptions?

Mr. GREENWALT. Do you mean, in terms of payment?

Mr. DE LA GARZA. I am asking about aerial hunting?

Mr. GREENWALT. It is done at the request of the landowner involved. The Service does not, as a practice, carry out a control program on private lands when the landowner is not desirous of having that kind of work done.

Mr. DE LA GARZA. When is it done on public lands?

Mr. GREENWALT. It is done on public lands at the approval of the public land manager and when there is a request by the land user, the grazer, that some predator control action be undertaken.

Mr. DE LA GARZA. Thank you very much.

Mr. Jellinek, since you have given testimony with respect to 1080, does the EPA have an acceptable substitute that would have the same effects as 1080?

Mr. JELLINEK. Mr. Chairman, there are no predicide toxicants registered for use against coyotes with the exception of the sodium cyanide M-44 device.

Mr. DE LA GARZA. Do you have any research of your own?

Mr. JELLINEK. We are not sponsoring research. That is the responsibility of the other departments at the table this morning. However, we do cooperate with them or with State researchers in the development of criteria for research so that if the research should turn out significant new evidence we would be able to incorporate that evidence into any future regulatory proceedings.

Mr. DE LA GARZA. Is it the position of EPA at this time that they would be willing to consider continued research on this substance by the States or by special permit to individuals or States?

Mr. JELLINEK. As with any pesticide situation, we would be willing to consider and to consult with those who are interested in developing research and experimental use permits to produce information that might be used in future EPA regulatory decisions.

We have a history of having done this in many areas and we make our decisions based on the evidence that is developed. We have generally been open to working with those who are interested in experiments and in research if we believe that there is a reasonable chance of developing significant data.

Mr. DE LA GARZA. Are you talking about a purely scientific viewpoint?

Mr. JELLINEK. That is correct. I am talking about a purely scientific viewpoint and from our own judgment as to whether the study that is proposed has any scientific chance of coming up with adequate information. We would not and have not participated in research programs that we do not think have much of a chance of developing significant information.

Mr. DE LA GARZA. That would be a personal or a collective judgment within the agency, but what I am trying to get at is that your permission for continued research would be based solely, aside from the long-term expectation of what the expenditure would be, on a scientific stand. Is that correct?

Mr. JELLINEK. It is primarily a scientific decision. Our scientists advise us on the scientific aspects of the proposed research.

Of course, we are also concerned that the research can be conducted in a way that does not result in misuse of the research chemical and that the research itself does not create an unreasonable adverse risk to health or to the environment.

Mr. DE LA GARZA. Thank you very much, sir.

I think it was in your statement, Mr. Herbst—not as a question but as a statement, concerning the fact that you say 1080 would never be acceptable to a majority of society. I challenge that statement.

Regardless of your qualifications as an expert in this field, I do not consider that you would be an expert on what the majority in the United States might do.

Further, I take it as a personal affront to me that you say, "since this legislation does not consider the adverse impact on wildlife resources or the environment."

Thank you very much. We appreciate your being here.

Mr. WAMPLER. Mr. Chairman, I have one brief question, if I may pose it.

Mr. DE LA GARZA. Yes, Mr. Wampler.

Mr. WAMPLER. Mr. Jellinek, as I recall, this committee requested of the Environmental Protection Agency the development and submission of the list of pests that could and should be brought under control. Has your department completed its work on this yet? My recollection is that it has not been submitted.

Mr. JELLINEK. I will have to defer to Mr. Johnson to answer that question.

Mr. JOHNSON. No, Mr. Wampler, we have not yet completed our work. We have a cooperative program under way right now with the U.S. Department of Agriculture and the State extension and cooperative research people. We expect some of our first outputs in approximately the next 3 months. They will deal with several major crops. We will be adding to that as we proceed.

Mr. WAMPLER. Will predators be added to that list? Would you classify a predator as a pest?

Mr. JELLINEK. Yes; it is a pest under the FIFRA and we are looking at the livestock industry as one crop production for which we will be developing a pest list.

Mr. WAMPLER. Than, a coyote would be a potential candidate for your list of pests. Is that correct?

Mr. JELLINEK. That is correct.

Mr. WAMPLER. Thank you.

Mr. Chairman, I have one final thing. I would like to read into the record a communication from the President of the United States. This was printed in House Document No. 95-60, of the 95th Congress, 1st session. It is very brief but I think it is appropriate to our hearing today.

It is from:

The White House, Washington, January 19, 1977.

It is addressed to:

Hon. Thomas P. O'Neill, Jr., Speaker of the House of Representatives, Washington, D.C.

Dear Mr. Speaker: Each year animal predators destroy large numbers of livestock in many areas of the Nation. Sheep are especially vulnerable to kills by coyotes.

Since 1931 the Federal Government has assumed a degree of responsibility of controlling animal predation—on both public and private lands. This function was originally established in the Department of Agriculture, then transferred to the Department of Interior in 1941.

I believe that it is now appropriate to return this function—except the migratory bird control—to the Department of Agriculture. Accordingly, I am herewith transmitting the necessary reorganization bill.

This legislation would reestablish most of the animal damage control activities of the Federal Government in the Department generally responsible for protecting the Nation's crops and livestock from various forms of damage—the Department of Agriculture. That Department already conducts predator research. It is close to the Nation's farmers and ranchers. At the same time, the Fish and Wildlife Service of the Department of the Interior will be relieved of a function at times inconsistent with its broader objective of protecting and enhancing the wildlife resources of the Nation.

I am committed to solving the predator problem by environmentally acceptable means. Increased research will be devoted by the Department of Agriculture to selective and humane ways of dealing with predators. Control activities will continue to be regulated under the Federal Insecticide, Fungicide, and Rodenticide Act, as administered by the Environmental Protection Agency.

No additional budget outlays would be required as a result of this proposed legislation.

An identical letter has been transmitted to the President of the Senate. Sincerely,

Gerald R. Ford.

[Enclosure.]

Mr. Chairman, along with this Executive communication came a proposed bill to transfer certain functions from the Secretary of the Interior to the Secretary of Agriculture. Unfortunately, the bill did not become law. Had it done so, perhaps we would have made more progress than we have to date in trying to solve the predator problem.

I just want to say again that I appreciate each of the witnesses appearing here. If my blood pressure appeared to be above normal, let me assure you that it was and still is, but I want to work with you in any way possible.

When you come here and oppose what we perceive as being an honest and sincere effort to find workable answers, taking into account a number of factors, then it causes our blood pressures to rise above normal.

I assure you that I am looking for workable answers and solutions. We want to continue to work with you in a cooperative way.

Thank you, Mr. Chairman.

Mr. DE LA GARZA. Thank you very much, gentlemen.

We are running a little bit ahead of schedule and we have some problems with respect to airplane schedules, and so on, so I am going to assume the privilege of allowing to testify at this time our colleague from Montana, Mr. Marlenee, and then we will accommodate the Secretary of Agriculture of the State of the State of Texas who has an early plane to catch and anyone else on the list of today's witnesses that may have a problem with transportation.

Mr. Marlenee?

STATEMENT OF HON. RON MARLENEE, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MONTANA

Mr. MARLENEE. Mr. Chairman, I ask unanimous consent to insert into the record my full text and all attachments thereto.

Mr. DE LA GARZA. That permission has already been given.

[The statement of Mr. Marlenee with attachments appears on p. 72.]

Mr. MARLENEE. Mr. Chairman, I commend you and the committee for holding these hearings and request that you add my name as a cosponsor of this bill.

It is very apparent that the Secretary of the Interior intends to discourage the control of predators on public lands.

It is apparent that public sentiment, commonsense, good judgment, and consideration of the neighbors of public lands are very low on the priority scale in the management of predators and, for that matter, public lands. When faced with such decisions, we as elected representatives have very little choice but to pass legislation of the type under consideration.

First, I would like to submit for the record, a letter received by the Montana Department of Livestock. The letter demonstrates the lack of commonsense and consideration that is encouraged by the Secretary. It indicates that 1080 is not the real problem but simply that no control of predators is the issue.

Mr. DE LA GARZA That letter has already been entered into the record by Mr. Wampler and appears on page 52.

Of course, we will be entirely happy to have you as a cosponsor of the bill.

Mr. MARLENEE. I believe the response from your own State department of livestock demonstrates how ridiculous the situation has become.

The letter from the Department of the Interior was to Ken Seyler, who is chief of pest control in the department of livestock in Montana. You heard it read by Mr. Wampler.

This is certainly not a letter that used a lot of common sense or practical experience, as was demonstrated by the reply that the Department of Livestock, State of Montana, made to that letter.

I will read from the reply:

No. 1:

The lands involved are checkerboarded private, state, and BLM. The livestock losses on the two ranches should be recognized as six calves and five sheep. Permission for aerial hunting on the private and state lands in question has been approved.

No. 2:

It must be recognized, coyotes causing damage on private, state, or BLM lands do not remain on just private or state lands after they kill livestock.

No. 3:

Your statement that use of a helicopter for aerial hunting in this area would cause excessive disturbance of big game, resulting in depletions of energy reserves and possible reduction of natality is nonsense! We operate three helicopters in our department for animal damage control and know from firsthand experience deer and elk do not stampede or run from helicopters when appropriate aerial hunting is conducted. Mr. Schellinger flies for U.S. Fish and Wildlife Service on a contract basis for animal damage control and experiences this type of flying regularly. Additionally, if you are worried about natality reduction, a few less coyotes in the immediate area may increase the fawn production more than most wildlife textbooks may lead you to believe. Besides, we thought the State Department of Fish, Wildlife, and Parks [sic] had jurisdiction over wildlife-related materials.

The whole thing boils down to one fact, does the BLM want to be a good neighbor or not? For the ranchers involved, you are affecting their pocketbooks by not allowing assistance with this coyote problem.

Additionally, whatever your decision, aircraft at any time can fly over these BLM lands within 500 feet of wildlife and not violate any state or federal flying

laws. Is snowmobiling, hiking, backpacking, cross-country skiing, and all other forms of activities also denied in these areas?

That was from Ken Seyler.

The actions of the Secretary have left the wool growers with few options to control the predator damage to their herds. Financial losses to the sheep industry have continually climbed over the years until they reached close to \$1 billion in 1978.

Secretary Andrus' actions are sure to make this figure much higher. It is also obvious that the Secretary does not comprehend the problem of predator damage and has ignored the advice of those in his Department, despite what may have been said here this morning by the generals that were marshalled here before us.

Mr. Guy Connolly, who had directed the 1080 toxic collar program and is with the Fish and Wildlife Service in Denver, said the only thing wrong with 1080 seems to be that it is a poison with "a very adverse political history."

I would like to quote from the 1964 report by the Interior Department on Wildlife Management for States:

If regulations for the placement and treatment of 1080 stations are strictly followed, we agree with the Branch of Predator and Rodent Control that it is perhaps the most efficient and one of the least damaging methods of coyote control on open lands of the western United States. There are a few other areas the Secretary has ignored in his decision making.

In the 1976 Federal Register the EPA noted:

The Agency has no valid evidence that the use of 1080 and 1081 have actually resulted in the deaths of members of the endangered species (vol. 41, No. 232).

The Sheep Producer Environmentalist Council has stated that:

No one method is a panacea for protection of Livestock. The animal damage control program must include a wide variety of methods, lethal and nonlethal, applied under careful supervision as specific circumstances dictate. Research must continue to be supported. Not only does this group support additional research but so does the Director of Fish and Wildlife, Mr. Greenwalt.

I have attached a letter from the Secretary indicating Mr. Greenwalt's position and the decision by the Secretary not to continue research into compound 1080.

What may interest members is the statement by Mr. Andrus' that, "Compound 1080 is so controversial that continuing to study its use is a waste of taxpayers' money."

Mr. Chairman, I thought, that the job of bureaucracy was to help to clarify controversial issues and not to instigate them or let them hang in the air.

Let us look at the cost of not approving 1080. A 1974 report by USDA stated that predation on sheep, primarily by coyotes, cost the consumer an additional \$10 million through higher prices. The industry cannot continue to suffer such losses and remain in existence.

The sheep growers need assistance in controlling predators. The unacceptable loss phrase used by the Secretary is a misnomer. Losses have been unacceptable for years and the Interior Department has done little, if anything, to correct the situation. Now, they are going to do even less.

An industry which contributes millions to the Nation should not be forced into continual losses due to the actions of a Cabinet member, especially when the action flies in the face of others within the Interior Department, the wood growers, and the consumers.

I would like to point out to the members that the Interior Department has suggested nonlethal techniques to control predator losses. These techniques include additional uses of herders but in a letter received by the Department of Labor, which is attached to my testimony, you will note that the Department of Labor will soon rule that herders must be given an opportunity to return to their native countries at the expense of the owner of the herd.

This additional cost will further reduce the income of the wool grower, will make it harder to maintain herders and to keep herders. It also shows how two agencies within our Government work in opposition to each other.

The current practice which has been in effect since the 1950's give the herders an opportunity to return home at owners' expense at the end of a 3-year contract. The practice will no longer be legal.

While this problem is outside the scope of the legislation, I certainly think it has some ramifications for the passage of the legislation. I think the subject should be pursued.

I would like to thank the members for allowing me to present this testimony.

[The prepared statement of Mr. Marlenee follows:]

STATEMENT OF HON. RON MARLENEE, A REPRESENTATIVE IN CONGRESS
FROM THE STATE OF MONTANA

Mr. Chairman, it is a pleasure to appear before the Subcommittee. As an ex-member of the Subcommittee, I know how committed each one of you is to promoting agriculture. I will address my testimony to H.R. 6725 and the recent changes in the Animal Damage Control program as envisioned by Secretary Andrus. I commend the Chairman of the Subcommittee for holding these hearings and his sponsorship of this legislation. If the members will permit, I would also like to briefly discuss an issue which is directly related to the loss of sheep to predators but not addressed in the legislation before the Subcommittee.

It is apparent that the actions taken by the Secretary will increase the number of livestock lost to predation, increase the cost of livestock products to the consumer, and provide little if any benefit to anyone but the coyote.

The actions by the Secretary have left the woolgrowers with few options to control the predator damage to his herd. Financial loss to the sheep industry have continually climbed over the years until they reached close to 1 billion dollars in 1978. Secretary Andrus' actions are sure to make this figure much higher.

It is obvious that the Secretary does not comprehend the problems of the predator damage and has ignored the advice of those in his department that are the most knowledgeable about the subject. I have attached a news article from a Montana paper which quotes Fish and Wildlife employees as distressed over the actions by the Secretary. Mr. Guy Connolly, who has directed the 1080 toxic collar program and is with the F & W service in Denver, said the only thing wrong with 1080 seems to be that it is a poison with "a very adverse political history." I would also like to quote from a 1964 report by the Interior Department on Wildlife management which states "If regulations for the placement and treatment of 1080 stations are strictly followed, we agree with PARC (Branch of Predator and Rodent Control) that it is perhaps the most efficient and one of the least damaging methods of coyote control on open

lands of the western United States. There are a few other areas the Secretary has ignored in his decision making." In the 1976 Federal Register, the EPA noted "the Agency has no validated evidence that the use of 1080 and 1081 have actually resulted in the deaths of members of endangered species." (Vol. 41, No. 232)

This leads to the question of the stand taken by environmental groups. While I know that many such groups will present testimony to the committee, and I in no way want to prejudice their position, I think that the reaction by two western environmental groups would interest you.

Bill Cunningham, Montana Representative of the Wilderness Society, told sheepmen that his organization had nothing to do with Andrus' policy on predator controls. Cunningham said commercial grazing is compatible with wilderness in most cases, and where it is not, perhaps wilderness designation should not be sought.

The Sheep Producer/Environmentalist Committee has stated that "no one method is a panacea for the protection of livestock. The Animal Damage Control program must include a wide variety of methods, lethal and nonlethal, applied under careful supervision, as specific circumstances dictate. Research must be continued to be supported." Not only does this group support additional research, but so does the Director of Fish and Wildlife, Mr. Greenwalt. I have attached a letter from the Secretary indicating Mr. Greenwalt's position and the decision by the Secretary not to continue research into compound 1080. What may interest members is the statement by Andrus that "compound 1080 is so controversial that continuing to study it is a waste of taxpayers' money." I thought the job of government was to help clarify controversial issues, not instigate them and let them hang.

Lets look at the cost of not approving the use of 1080. A 1974 report by the USDA stated that predation on sheep, a majority by coyotes, cost the consumer an additional \$10 million through higher prices.

In the same year, the costs to the sheep industry were approximately 46.9 million. Attached you will find a table, supplied by the

National Woolgrowers, which indicates the dollar loss suffered by the sheep industry. In my state of Montana, losses in 1978 amounted to over a staggering 10.9 million dollars. This is from a total value of sheep for that year of \$42.2 million. The estimated loss to consumers is \$98 million. Or put another way, the amount of lamb lost to predators in 1978 would have fed 220 million Americans for 32 days in the year.

In a study at Florence, Montana, conducted by the Denver Wildlife Research Center, U.S. Fish and Wildlife Service, Montana Department of Fish and Game, University of Montana, and the Wildlife Management Institute Cooperation, concluded that coyote predation was the primary cause of sheep losses, and predators killed more than 16 percent of the flock each year (over the two year study period) for a total of 1,027 sheep. Coyotes were responsible for 97.1 (first year) and 99.3 (second year) of all predation. Secondary losses, resulting from harassment by coyotes, included reduced lambing success, increased excitability of flocks, reduced growth rates and difficulty in fattening lambs, and loss of unborn lambs.

The industry cannot continue to suffer such losses and remain in existence. The sheepgrower needs assistance in controlling predators. The "unacceptable loss" phrase as used by the Secretary is a misnomer. Losses have been unacceptable for years, and the Interior Department has done little to correct the situation. And now, they are going to do even less. An industry which contributes millions to the nation should not be forced into continual loss due to the actions of a Cabinet member--especially when the action flies in the face of others within the Interior Department, the woolgrower, the consumer.

I would like to point out to members that the Interior Department has suggested non-lethal techniques to control predator losses. These techniques include additional use of herders. But in a letter received from the Department of Labor (attached) you will note that the DOL will soon rule that herders must be given the opportunity to return to their native countries at the expense of the owner of the herd. This

additional cost will further reduce the income of the woolgrower. It also shows how two agencies work in opposition to each other. The current practice, which has been in effect since the 1950's, gives the herder the opportunity to return home, at the owners' expense, at the end of the three-year contract. This practice will no longer be legal. While this problem is out of the scope of the legislation before the subcommittee, I think that the subject should be pursued. I would like to thank the members for allowing me to present this testimony.

(Attachments to the statement follow:)

Fed predator controllers upset with new policies

BILLINGS, Mont. (AP) — Federal employees involved in predator control and research have told the Montana Woolgrowers Association they are distressed with the new predator control policies announced by their boss Interior Secretary Cecil Andrus.

Andrus announced sweeping changes in predator control Nov. 9, including an end into research with 1080, a highly-toxic and controversial coyote poison.

"Obviously the political elements are more important than the factual ones," when decisions are made like banning 1080, Guy Connolly of the U.S. Fish and Wildlife Service in Denver, who has directed the 1080 toxic collar program in Texas, said.

Norton Miner, director of the U.S. Fish and Wildlife Service in Billings, was asked about to explain Andrus' new policies.

Miner said he was distressed by Andrus' policies and feared coyote will be "an impossible burden" under the new regulations.

Andrus' talk about "controlling the offending animal" appears not to leave it up to the trapper to decide which is the offending animal, Miner said.

Critics of 1080 say one reason they oppose the poison is its secondary impact, because a poisoned coyote can in turn kill wildlife which eat the carcass.

But Connolly said in Montana it was found that nothing scavenged on dead coyotes.

In reply to a question, Connolly said the only thing wrong with 1080 seems to be that it is a poison with "a very adverse political history."

Bill Cunningham of Helena, the Montana Representative of the Wilderness Society, told the sheepmen his organization had nothing to do with Andrus' policy on predator controls.

Cunningham said commercial grazing is compatible with wilderness in most cases, and where it is not perhaps the wilderness designation should not be sought.

Livestock producers and environmentalists are natural allies, he said.



United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240Honorable Ron Marlenee
House of Representatives
Washington, D.C. 20515

FEB 1 - 1980

Dear Mr. Marlenee:

Thank you for your letter of December 17 about my recent decisions concerning the Animal Damage Control (ADC) Program. I appreciate this opportunity to clarify some misunderstandings about my directives.

First, I would like to point out that the only immediate actions resulting from my November decisions are ending research on compound 1080 and prohibiting Federal employees from the practice of denning — killing coyote pups in the den.

I did not accept the recommendation of Fish and Wildlife Service Director Greenwald to settle the question of compound 1080 by an expanded research program. He estimated that it would take from three to five years to answer the crucial questions about its safety and efficacy. I believe, however, that compound 1080 is so controversial that continuing to study it is a waste of the taxpayers' money. Even if it were to be tentatively approved, then almost certainly it would be subject to long and costly litigation. Instead, we should devote our research funds to seeking a substance which is effective and environmentally acceptable.

Denning accounts for only a small fraction of the coyotes killed in the Animal Damage Control Program, yet it is a practice which is repulsive to the majority of Americans. I believe its prohibition will have minimal, if any, impact on livestock losses and will make the Federal program more acceptable to the public.

While present control methods — aerial hunting, trapping, and the M-44—will continue, I have directed that they be used as selectively as possible. I have also directed that the Fish and Wildlife Service emphasize and encourage the use of nonlethal controls to the degree practical now, and focus its research efforts on them with the long-term goal of minimizing the use of lethal controls. Nonlethal methods will have to be proved effective and acceptable before we move to implementation. The Fish and Wildlife Service is developing criteria for defining "offending animals" and "unacceptable levels" of losses, as well as procedures for documenting those losses and applying preventive controls.

It should be emphasized that nothing in my decision prohibits ranchers and herders from carrying out private predator control activities where there is no conflict with state and Federal laws already in effect. The new Federal policy applies to control of predators on Federal rangelands by Federal employees or predator control activities undertaken with the assistance of Federal funds.

The predator control controversy has been around for a long time and will remain in the future. What I am trying to do during my stewardship as Secretary of the Interior is to eliminate the emotional finger-pointing and remove predators from those areas where they inflict unacceptable damage to livestock, without attempting to declare war on all coyotes. To do this, we have to look at both long-term and short-term solutions. Somewhere between those who do not want any coyotes killed and those who would like to eliminate the species entirely, I think that there are reasonable solutions and that, with your continuing advice and cooperation, we can find them.

I am attaching copies of my decision memorandum and a recent speech I gave, which explain my decision in detail. If you need further information, please let me know.

Sincerely,

(Sgd) Cecil D. Andrus

SECRETARY

Attachments

AGRICULTURE/livestock

May 15, 1960

sheep-labor

The Honorable Ray Marshall
Secretary of Labor
Department of Labor
Washington, D.C.

Dear Secretary Marshall:

For more than two decades foreign sheepherders have been admitted to this country with non-immigrant status. Since enactment of the H-2 program in 1956, these herders have been employed routinely with three-year employment contracts.

These contracts, consistent with current administrative practices, require the employer to provide the herder with full-paid return transportation at the end of the three-year contract term.

It has come to my attention that the Employment and Training Administration intends soon to issue new guidelines which would require the employer to offer the herder return transportation after only 11 months of employment. By this change, woolgrowers would be effectively deprived of their existing right to contract with foreign herders for three years of employment.

This change would impose significant hardship on the sheep industry and create higher prices to the consumer. It is additionally troubling that this change is contemplated to be announced just prior to the onset of the lambing season when the need for herders is critical. I do not understand the reason for a change which would be contrary to the administrative practice followed by your Department since the 1950's. The proposed change would also apparently create a condition inconsistent with both the spirit and the letter of the Immigration and Nationality Act and its related regulations.

Since the Department of Interior, in their restructuring of the Animal Damage Control Program, has supported and encouraged the additional use of sheepherders, the position of your department is even more difficult to comprehend.

With these concerns in mind, I ask that you not issue these guidelines. I would appreciate hearing soon from your office or the Employment and Training Administration so that I might have an explanation of this proposal and hear the reasons why such a change is being contemplated.

Sincerely,

Ron Marlenee, M/C.

U.S. DEPARTMENT OF LABOR
EMPLOYMENT AND TRAINING ADMINISTRATION
WASHINGTON, D.C. 20515



Honorable Ron Marlenee
House of Representatives
Washington, D.C. 20515

Dear Congressman Marlenee:

Thank you for your letter of February 15, 1980, to the Secretary of Labor concerning the Department's plans to issue new guidelines for processing applications for sheepherders under regulations governing labor certification for temporary foreign agricultural workers. The Secretary has referred your letter to this office for reply.

The purpose of the guidelines is to reduce the amount of paperwork and time necessary for the Department to make determinations on the certification requests for temporary foreign sheepherders. The guidelines were developed in consultation with the Western Range Association (WRA) which represents the majority of wool growers who import sheepherders. Agreement has been reached on all provisions of the guidelines with respect to the procedures for testing the domestic labor market to determine the availability of U.S. sheepherders. The Department is also including in these guidelines a specific clarification of its regulations with respect to the provision which requires employers of temporary foreign workers to provide return transportation to foreign workers upon completion of their contract. Although the members of the WRA have been in the practice of offering 3-year contracts to their foreign herders, the regulations contemplate a worker contract period that is consistent with the period of certification which cannot exceed 11 months. The WRA opposes enforcement of the requirement that foreign herders be offered return transportation upon completion of a maximum 11-month contract.

The Department does not believe that the guidelines will have a negative effect on the granting of certifications for the oncoming lambing season. The goal is to streamline the certification process by eliminating unnecessary delay in making determinations.

The Immigration and Nationality Act (INA) provides for the admission of foreign workers into this country on either a temporary or a permanent basis depending on the nature of their employment. A foreign worker coming to perform labor which is permanent in nature must secure labor certification under Department of Labor regulations at 20 CFR 656 and may then petition the Immigration and Naturalization Service (INS) for a permanent resident visa. An alien who is a permanent resident of this country enjoys most of the benefits of citizenship including the freedom to change employment.

An alien coming to this country to perform temporary agricultural labor must secure labor certification under regulations at 20 CFR 655 and may then be admitted under the "H-2" provision of the INA. Temporary workers may be granted H-2 visas by the INS for periods not to exceed 1 year. Such visas may with new labor certifications be extended twice allowing the alien an unbroken stay in this country for a maximum of 3 years. An alien with an H-2 visa may remain in the country only so long as he is employed by the employer who sponsored his admission.

In 1957, the House Judiciary Committee, recognizing that sheepherding is a permanent occupation but concerned over the high turnover of foreign herders, recommended that sheepherders be admitted under the H-2 provisions of the INA (House Report No. 67 85th Congress, 1st Session). The Department has been guided by this recommendation of the Committee and has been processing requests for sheepherders under its "temporary" regulations at 20 CFR 655. It should be noted that the Department also processes requests for sheepherders under the 656 (permanent) regulations and often receives such requests from the WRA for herders who have been in H-2 status for 3 years. The employer of sheepherders has, therefore, the option to request certification under the "permanent" regulations which have no requirement for the employer to provide transportation.

When herders are requested under its "temporary" regulations, it is the legal obligation of the Department to require compliance with the provisions of those regulations. All employers of foreign temporary agricultural workers must provide return transportation by the end of the certification period. In its new guidelines, the Department requires that return transportation must be offered to the foreign herder after 11 months, but allowing for recertification and visa extension does not require that it be paid until termination of employment. It is the position of the Department that retention of a work force, either domestic or foreign, is the responsibility of the employer and may be accomplished by providing adequate wages and working conditions. Foreign herders on H-2 visas should not be induced to stay on the job by the withholding of a benefit which under the Department's regulations has been earned after 11 months.

Please let me know if you have further questions on this matter.

Sincerely,



DAVID O. WILLIAMS
Administrator
U.S. Employment Service
376-6289

Predator losses in Montana

Year	Sheep inventory (: 1000)	Sheep killed by predators (: 1000)	Lamb crop (: 1000)	Lambs killed by predators 1/ (: 1000)	Value of predator loss (\$1000)
1958	1722	35	2,0	1136	110 9.7 3372
1959	1840	36	2.0	1201	111 9.2 2651
1960	1872	37	2.0	1225	114 9.3 2289
1961	1768	35	2.0	1201	111 9.2 1942
1962	1550	33	2.1	1092	104 9.5 2382
1963	1581	36	2.3	1060	112 10.6 2429
1964	1553	38	2.4	1037	118 11.4 3033
1965	1503	39	2.6	1006	122 12.1 3618
1966	1387	42	3.0	926	130 14.0 4028
1967	1351	35	2.6	842	109 12.9 3197
1968	1250	34	2.7	805	105 13.0 3520
1969	1178	22	1.9	760	70 9.2 2663
1970	1113	34	3.1	743	107 14.4 3736
1971	1067	33	3.1	740	102 13.8 3240
1972	1000	31	3.1	711	96 13.5 3630
1973	880	35	4.0	604	109 18.0 4901
1974	750	31	4.1	550	96 17.5 3748
1975	675	38	5.6	471	119 25.3 6377
1976	595	25	4.2	420	79 18.8 4745
1977	570	25	4.4	375	78 20.8 5900
1978	530	30	5.7	349	93 26.6 10954

1/ Includes estimated number of lambs killed by predators before docking.

TABLE I--Estimated loss of sheep and lambs to predators for the United States

Year	Sheep and lambs killed by predators (1000)	Predator losses as percent of inventory plus lamb crop (%)	Value of predator loss (\$1000)
<u>United States</u> ⁸			
1958	1546	4.00	33,651
1959	1708	4.06	29,017
1960	1958	4.53	28,405
1961	1904	4.42	24,688
1962	1843	4.49	26,947
1963	1790	4.56	26,025
1964	1651	4.51	27,411
1965	1505	4.36	31,766
1966	1676	4.94	35,452
1967	1696	5.19	31,302
1968	1553	4.81	40,183
1969	1439	4.64	37,341
1970	1439	4.68	36,178
1971	1549	5.28	36,907
1972	1622	5.65	42,933
1973	1568	5.63	52,433
1974	1491	5.74	46,909
1975	1525	6.57	57,586
1976	1362	6.45	58,803
1977	1382	6.83	72,377
1978	1321	6.68	97,819

Mr. DE LA GARZA. Thank you very much.

Our next witness is Hon. Reagan V. Brown, commissioner of agriculture of the State of Texas, who will also be making a presentation on behalf of the Governor of the State of Texas.

Commissioner Brown, we are happy to have you here.

Mr. WAMPLER. I would like to add my word of welcome to Mr. Brown.

Mr. Chairman, this is a fact that I hope that you and other Texans are aware of. Mr. Brown's reputation as an able administrator and as one who is knowledgeable in agriculture extends far beyond the borders of Texas.

We appreciate the many contributions that he has made and we are vitally interested in what he has to say today.

STATEMENT OF REAGAN V. BROWN, COMMISSIONER OF AGRICULTURE, STATE OF TEXAS, REPRESENTING GOVERNOR CLEMENTS

Mr. BROWN. Thank you, Congressman.

I am delighted to be here as the commissioner of agriculture from Texas and to appear before this distinguished committee chaired by one of the finest Congressmen we have from our State.

Congressman, if your blood boiled a little bit, mine did too this morning because I did not come to town on a load of wood. I had 25 years with Texas A. & M. University and as a county agricultural agent I have been working in this field for many years. I have organized over 1,000 communities in Texas through the years.

I do come here representing the distinguished Governor of our State, Governor Clements, who is our first Republican Governor in 100 years.

This has bipartisan support. He is backing what we are doing here today 100 percent.

In this audience today are also the presidents of some of the livestock organizations from my State and others that will be participating.

I am going to include in my testimony the proceedings of the Predator Control Summit that was held in Austin, Tex., just a few weeks ago, where the distinguished Secretary of the Interior, Cecil Andrus, was in attendance. He was there and we also asked Jimmy Carter, Bob Strauss, and everybody else in Washington. We had to have him down there to talk to us.

This report is so good that you could do a doctoral dissertation at Harvard on it. There has never been anything pulled together that has been any better on the subject at hand. There are hundreds of letters in here from managers and others.

The amazing thing about the testimony of the Secretary of the Interior—and he is a very good friend of mine—is that he stated that Mr. Connolly, who will be here in just a few hours, and who works for the Secretary of the Interior, said his research points out that 1080 is a good thing to use but the Secretary did not know about his research that was done in his own Department.

I sat in the breakfast room this morning with some of the people who are now in this room and I heard from a few dedicated employees of the Fish and Wildlife Service about techniques and controls I

had never heard of before. One of the employees—and he is in this room—will speak on this program later.

It is no wonder that the people in the hinterlands think that the bureaucracy is full of a lot of stumblebums.

He went on, in his testimony, to say that he had directed Mr. Greenwald to correct the situation.

I ask you distinguished members of this committee: How long do you think that the people in the hinterlands are going to put up with this kind of business? They are beginning to wonder if we can govern ourselves, especially in Texas.

I come this morning as a commissioner of agriculture. I am an elected official. I carried every county in Texas except 17. I also come as the commissioner of the third largest food-producing State in this Nation.

Our shrimp boats are tied up this morning in Texas because of high fuel costs. We have 6 million acres of land on which grasshoppers are up to 80 per square yard. Our hands are tied. We cannot do anything about them.

A great number of years ago I used 1080 as an extension worker and we eliminated rats from our State. The headlines of the Dallas Morning News on Sunday said that the rats are eating up the poor children's toes because we no longer have any effective rat control.

I want to get into some other points but I must get back to the testimony here.

I appreciate the opportunity to speak to you today. The decision to bring together the talents and interests of the Departments of Agriculture and Interior to develop sensible, effective animal damage control methods is an important one, not only to the State of Texas but to the other States suffering losses of livestock to predators.

I will say to you and to the invisible bureaucracy that writes the rules without knowing anything that we have no conflict. The summit conference was a meeting of an environmental group, familiar with the earth, including the Isaac Walton League and many others. We asked them to sit down and talk with us.

I am an environmentalist. The ranchers of our State are environmentalists. Without them you do not have any animals. You do not have any clear water and blue sky.

However, we are sick and tired of losing our sources of income.

To determine accurately the losses of sheep and goats to predators in Texas, the Texas Department of Agriculture, in cooperation with the Texas Crop and Livestock Reporting Service, performed a survey for the year 1978. The survey report, which I submit as exhibit A, showed that \$13 million in market value was lost to predators, mainly coyotes. Goat and kid losses due to predation amounted to 72 percent of the number found dead.

Over half of all the death losses in sheep was attributed to predators, mainly coyotes. Deaths due to predators since 1967 have been increasing for all breeds.

On the last page of the report are two charts which tell the story of the sheep and goat industry in Texas. Both show the decline in the numbers of sheep and goats, despite the fact that prices and demand have risen for both commodities.

For example, in 1965 there were 4,060,000 Angora goats in Texas. Today there are 1,400,000. Sheep numbers decreased from 4,539,000 in 1965 to 2,400,000 today.

There are counties in Texas which once had flourishing sheep and goat ranches that now have none. The Interior Department has shown no interest in reducing predation in these counties so that herds can be started again.

Cattle were not included in the Texas survey but the loss of even one calf today is substantial with present market prices being what they are. The Department of the Interior cited a loss range of 0.6 percent to 1.1 percent of calves to predators in a 1977 study covering the Great Plains and Western States.

These figures are presented in the Final Environmental Impact Statement of the animal damage control program, issued in June 1979. If those percentages were applied to Texas today the value of lost income would be from \$15 to \$28 million.

Let me tell you how a coyote kills a little calf. He eats his kidney out. He tears his hind quarter off. He cuts his throat. It is a suffering, maiming, terrible thing to see this happen.

Predation also affects range management practices for cattlemen. Goats are used to clear brush in native rangeland where cattle graze and have proved to be excellent at their job.

We have thousands and thousands of acres which are now being inundated by the mesquite tree. It is crowding out our grass and there is rule after rule stating we may not use 2,4,5-T or 2,4-D. The goat has been very effective in helping us to control brush and I am sure we would all prefer a natural weed killer whenever possible. When predators kill off the goats the rancher must then turn to herbicide treatments which add to his production costs.

For the past decade livestock raisers have lost one control method after another through decisions made by persons far removed from agriculture. In some cases it appears to ranchers that bias against any means of animal damage control has blurred the vital scientific objectivity necessary for Government to make decisions that affect millions of dollars in income.

The Department of the Interior is charged with the very important responsibility of the protection of wildlife in our Nation and it is understandable that personnel may be overzealous in their drive to preserve this important segment of our environment.

Ranchers have felt that research directed by the Interior Department has been unduly influenced by anti-animal damage control proponents. The hallmark of scientific excellence is truth and objectivity in reporting research and the public must have a means of achieving an unprejudiced search for the best methods to solve problems.

Let me remind you that for more than a quarter of a century I was the extension leader of the land grant university in Texas, along with doing research and teaching.

The Agriculture Department is concerned with progress in domestic livestock production and is aware of the needs of ranchers. We applaud the efforts of this committee to create a shared responsibility for animal damage control.

The inclusion of compound 1080 as a subject for continued research is most important to Texas ranchers. In Texas we are seeking an experimental use permit for the chemical in the toxic collar, for it shows real promise.

Let me be sure that people know what we are talking about. We are talking about putting a little plastic bag around the sheep's neck such that when the coyote comes out to kill him, it kills the coyote. That is what we are talking about.

Preliminary research at the Denver Wildlife Research Center, an interior operation, indicated that there was no evidence of secondary poisoning hazards from the chemical. I hope you will protect him if retributive measures are taken against the scientist who made these findings.

The hazard to nontarget species was part of the rationale given by the Environmental Protection Agency for its suspension. Further research can prove or disprove its danger to nontarget species.

Another advantage of using compound 1080 in the toxic collar is that the chemical kills only the offending animal not all of a species. There is absolutely no threats of eradicating an entire species. We now have coyotes, I learned this morning, all the way into Mississippi. We have no shortage of coyotes.

Details of research on compound 1080 are covered in exhibit B. Proceedings of the Predator Control Summit, which was sponsored by the Texas Department of Agriculture in January 1980. Our department drew together representatives from environmental groups, the livestock industry, and Government agencies, including the distinguished Cecil D. Andrus, Secretary of the Interior.

In my opinion, the report of the proceedings is one of the most complete documents of the problems of animal damage control ever published.

Policies of the environmental groups, Government agencies, and current conditions are included in the publication. I encourage committee members to read the testimony, especially the letters from ranchers who are suffering as a result of Government policies.

The Interior Department's policy statement of November 1979 stressed that the emphasis of future research would be placed on nonlethal devices and improved animal husbandry practices. The livestock industry would welcome research on either of these methods if they held promise of success in the near future. However, so far none tested in field studies have reduced predation.

Various proposed fences have impeded deer migration and are costly to install and maintain. In addition, most have simply not repelled the coyote. Sheep herders have also been proposed an answer but they are truly a nearly extinct breed. Penning herds at night has resulted in the coyotes' digging under fences and switching their killing to daylight hours.

We feel that major immediate emphasis should be placed on methods that could be put into practice now or without undue delay. Any delay is a costly one. Each day that passes means that more sheep, goats, and calves are being killed.

The longer we delay in finding an answer, the more ranchers will go out of the sheep and goat business, and the longer we delay, the more predators will multiply to prey on the Nation's livestock.

Five years spent on noise, scent, and taste aversion techniques will be fruitless ones for ranchers. We believe that personnel from the Department of Agriculture will understand and will act on the need to push for research on practical solutions that can be implemented now.

The delay is not only costly but is also frustrating. Today many citizens feel that they have lost control over their own Government. It is not news to anyone in this room that Americans are growing more hostile toward unelected agency personnel who create and enforce regulations with little regard for their economic impact.

Some groups wish to wave aside any mention of dollars and cents when dealing with the environment but the farmers and ranchers affected cannot afford to do so. The economic value of wool and mohair in Texas in 1979 was \$65.9 million. Mohair prices are the highest they have ever been in history.

We met with the South African wool growers. We just completed a mission to South Korea and Japan. We are working all over the world and we cannot let this business go down the drain because we cannot protect goats on our own farms and ranches.

When a ewe is killed, not only her market value is lost but the income from future lambs or kids is lost and the income from wool or mohair clips vanishes.

That income is not all that is vanishing from the American agricultural scene. I believe that this country is facing a food crisis.

When the Commissioner of Agriculture of the third largest producing State in the Nation voices that type of concern, I believe that lawmakers must and will listen. In an era of plentiful supplies of milk, wool, mutton, cotton, and other farm products this concern falls on deaf ears, but with the continual loss of farm and ranch families and with expanding domestic and world populations, the handwriting is on the wall. We must protect those engaged in feeding and clothing our people.

Those in leadership who do not use commonsense in deliberating matters affecting food and fiber production will wring their hands in despair when it is too late. If we lose certain segments of agriculture, such as the sheep and goat industry, it will take years to reestablish herds when we need them.

Many in husbandry believe that it will be impossible to revive a dead industry. We must not play Russian roulette with the lifeblood of this Nation, the agricultural industry which gives the United States a trump card in international negotiations.

This is what we are talking about today—not coyotes or lambs—it is food and fiber for this Nation.

So far, the arguments from ranchers have apparently not reached decisionmakers or have been ignored by some in Washington who seem to have developed tunnel vision where predators are concerned. We believe that making the Department of Agriculture an equal partner in animal damage control programs could provide a balanced dimension and will, we hope, give ranchers a voice in programs their tax dollars support.

Listen to me. Today our shrimp boats in Texas are tied up, mostly because policies are bringing in the Vietnamese. They are building boats by the hundreds down there.

Our sheep and goat industry is being decimated by coyotes. I have just come back from Mexico. I sat with the fellow who sits at the right hand of Portillo. They have 70 million people in Mexico and 15 million of them live in Mexico City. Fifty percent of the population

in Mexico is over 50 years old. They do not have any food. They cannot produce it.

In South Korea there are 40 million people. We just left a delegation yesterday in Amarillo, Tex., who said that 70 percent of their country is mountainous.

Last week we signed contracts for 325,000 bales of Texas cotton with Taiwan. Every acre of land in Russia is as far north as New York State.

I am the commissioner of agriculture of the third largest agricultural producing State in the United States and we are down to 159,000 farmers. In the hundreds and hundreds of apartments I see in this beautiful city, in New York and Philadelphia it is broader house living, I read the question: Who is going to produce the food?

I plead with you, gentleman. We did not fly all the way across the United States—I cannot tell you the urgency. I have tried to incorporate into some of my testimony that food is our trump card. Friends are going to look to us and we must depend on long-range policy concerning agricultural sales.

We cannot sit idly by and see one of the greatest industries in our State, in Montana, Nebraska, North Dakota, and South Dakota, and many other States go down the drain because we cannot bring the scientific minds and expertise of certain people into a workable program.

Congressman de la Garza, I commend you for your legislation. We are going to do everything we can with every means we have—from the President of the United States down—to enact some way to protect our environment and the wonderful people who love it and yet continue to produce the food and fiber in this Nation that we need.

Thank you very much.

Mr. DE LA GARZA. Thank you very much, Commissioner.

Without objection, the material you supplied will be included in the hearing record at this point.

[Proceedings of the Predator Control Summit and 1979 Texas Sheep and Goat Death Losses and Marketing Practices are held in the sub-committee file.]

Mr. DE LA GARZA. Mr. Wampler?

Mr. WAMPLER. Thank you, Mr. Chairman.

Commissioner Brown, I want to thank you for your statement. It obviously shows a great depth of concern and strong feeling on a matter about which you are obviously very knowledgeable.

Earlier this morning we heard other witnesses comment about the biological control of weeds and brush. Let me just relate an experience that I had earlier this year. I had the pleasure to be at Baylor University for the dedication of the legislative library named in honor of our former distinguished colleague and chairman of this committee, Mr. Poage.

While there, we spent the night in Temple, Tex., and visited the research station at Temple that, I think, is carried on jointly by USDA and Texas A. & M., at which they are trying to find ways to control certain brush, mesquite and others, that would not only have the effect of controlling these weeds but also of freeing up a significant amount of moisture that is now being consumed by these noxious weeds and other plants.

If I understand the agricultural practices in Texas, use of goat herds does have a positive impact on controlling weeds that otherwise nature does not control. Is that correct?

Mr. BROWN. That is absolutely correct, Congressman. We are using the scrub brush and weeds to produce a salable product.

Mr. WAMPLER. It seems to me that this is an effective and environmentally acceptable way to balance nature and to address our concern about the encroachment of needless weeds which consume thousands of acres of rangelands that could be put to more productive uses as well as to conserve water. If I understand the topography and geology of Texas, a good deal of it is, at least, semiarid and water is scarce, particularly at certain times of the year. Is that correct?

Mr. BROWN. It is absolutely correct, sir.

Mr. WAMPLER. There is one other thing that you mentioned in your very comprehensive statement. We heard suggested today by others that fencing would be one effective way to control predators and you commented on that. Do I understand you correctly that it is your feeling that fencing is not an effective way, even if you were to corral livestock?

Mr. BROWN. Absolutely, sir. It is an asinine suggestion. It will not work. It is not economically sound.

You can go out to Sears Roebuck and get a cyclone fence about 15 feet high, dig a ditch, and pour a concrete slab 4 feet deep. Then he could not dig under it and he could not jump over it, but who has the money to do that? We have to use economics.

Most of our sheep and goats are produced out in the wide open spaces of Texas. The sheepman has penned his sheep for years. It is a common practice using corrals but they have not found many fences that the coyote cannot get over or under.

Mr. WAMPLER. I gather also, from your testimony, that you have the feeling that there is a large potential for export of goat and lamb to—I think you principally mentioned Mexico but there are other potential markets that could be developed if we could be a reliable supplier. Is that correct?

Mr. BROWN. If I had refrigerated ships I could. In America we do not have those refrigerated ships. We could ship, in the next month, every sheep and goat we have in the State of Texas. They would buy them. The Saudi Arabians would buy them. They have the money. They are upgrading their diets.

I mentioned 53,000 head, Congressman Wampler. I administer 6 livestock export pens; 120,000 head of cattle have gone all over the world through my pens. That is getting our dollars back.

We export over \$2 billion worth of agricultural products from Texas each year out of, I believe, the total \$38 billion of American exports.

The stock that we ship to Mexico are old ewes. When I became commissioner of agriculture, we had no market for these old ewes. They grew old, died on the ranches, and the buzzards ate them. We found that in Mexico they had a market for the older ewes. We were able to market the pelts and then they use the older meat to put in different foods that they use down there.

Fifty-three thousand of these have gone through our export facilities. The ranchers have been getting checks for \$5,000, \$6,000, and \$15,000 for something for which he had no market.

The older ewes are very easy for the coyote to kill. That makes for a lost market.

One of the causes of inflation in our country is that we are sending dollars out for oil. Agriculture is about the only thing we have left to get our dollars back.

We have a tremendous market. I just came back from Europe. We could ship all we can get of the Texas Ruby Red grapefruit, from the Congressman's district, to Germany and France. They know about Texas Ruby Red grapefruit.

Concerning our cotton, we made 5.7 million bales of cotton in Texas this year. It is the largest crop we have ever made. We are going to export most of it. We sent 325,000 bales last week to Taiwan. Orders are coming in every day.

I left a group from Sweden yesterday. They are here to buy. That is the name of the game, Congressman: Sales.

But listen, if the grasshoppers take over—there are 6 million acres in Texas now that have 80 grasshoppers per square yard. It goes into New Mexico, Colorado, and up through the Dakotas. If the Friends of the Earth prevent us from spraying, they will obliterate every bit of our crops. Eighty grasshoppers per square yard will eat the fence posts. They will eat the barbed wire if you are not careful. It is dangerous when you have eight. We have to control grasshoppers.

We cannot let our grass go. Without grass we cannot produce cattle. Then the person trying to buy a steak in New York suffers. All these things work together.

We are now, in Texas, down to 30 people that produce all the eggs in our State. Some of them have 1.5 million hens. One of these days they will decide that eggs are to be \$5 a dozen.

Consumers had better be listening to what I am saying. We must protect agriculture.

We lost 2,000 farmers in our State last year that went out of business, partly due to high interest rates. My son is the vice president of a bank. He made cattle loans last week at 21 percent interest. You show me anyone, Congressman, who can make any money with 21 percent cattle loans.

Yesterday, in Amarillo, Tex., I sat with cattle-feeding, hard-handed men—you shake hands with them and it is like putting your hand in barbed wire—that feed out 10,000, 50,000, or 60,000 head of cattle. They were losing \$300 a head. How long do you think you will have steaks in Washington if this goes on?

Although now I am getting off the subject. We are not talking about coyotes and lambs. We are talking about a food and fiber supply for this Nation. That is what we are talking about.

We are seeing it dwindle all the time.

Mr. WAMPLER. I have one final question, Mr. Chairman.

Mr. Brown, I know that you are an individual who has had a long and distinguished career and experience in the mission of our land-grant colleges and universities, especially as it applies to research and teaching in extension.

You heard the testimony earlier this morning. I was appalled when it was revealed that the Secretary of the Interior decided not to let the scientific community make some basic determinations on the desirability of using certain chemical compounds as a method to try to control predators.

Do you agree with me that in fact we ought to press forward to get more scientific research to find viable alternatives, rather than these decisions being made on political, environmental, social, or whatever other grounds there might be?

Mr. BROWN. Congressman, for more than a quarter of a century I have been involved in research. The man that looks into the test tube and the microscope is the hope of this Nation.

Everything that we can possibly do to control predators, as the distinguished gentleman testified, is good. We need to accelerate that. We need to pen all of the other types, but we must also use things that the Department of the Interior in its own research say are not too dangerous.

We have had vast experience with 1080 in our State. Out on those large ranches we will not get the secondary killing, in my opinion. Research also points that out.

Right now the palm trees on the Rio Grande River are dying from disease. We have a terrible hog disease from Cuba that is coming in. We have all of these things—animal health, environmental control, water utilization—to which we have to find answers because in the next 20 years we will double the population of the world. That is a known fact. And who is going to feed them? Who is going to feed them?

If we let the rangelands grow up with brush in Texas, we let our sheep and goat industry go down, once we lost it we would probably never get it back or it would take years.

If you do not listen to what I am saying here today, you will wring your hands in about 8 years and say, "My gosh, why didn't we listen and guard the food supply of this Nation?"

Let me add this. We are importing 18 percent of our fruit and vegetables from Mexico. I administer all the inspection services, not only for my State but for Mexico as well. If we did not import the fruit and vegetables from Mexico we would not have them.

I am a great believer in the idea that we ought to grow them, but who is going to grow them? We have gotten out of business.

I used to be county agent in the county where the extension service was born. I had 43 grade A dairies. Now there is not a grade A dairy left in that county.

Do you see the point I am making? I plead with you here, as we talk about the sheep and goat industry, not to let them go the same way.

Mohair people are making money. There is a great world demand for sheep and goats. Let us help our ranchers protect them. Let us find a better way but right now let us use the tools that we have.

My department is responsible for administering the M-44 devices and all that. We have had very little problems.

Mr. WAMPLER. Commissioner Brown, I thank you very much. Let me assure you that I am going to read the proceedings of the predator control summit. I have had a chance to hurriedly thumb through it during your presentation, not that I was not listening to you. I was listening to you and thumbing at the same time. As you say, I think this ought to be required reading, not only by every member of this committee but by anyone who has an interest in this subject.

I am talking about those on all sides of the controversy. It appears to me to be a document that puts in clear focus what our alternatives

are, what our choices are, and what the effects of those choices are going to be on maintaining viable agricultural capabilities in this country. I think you have summarized it so well this morning.

Mr. BROWN. I want to say to you, sir, as the ranking Republican member on this great committee, that we appreciate the leadership that is being exhibited here.

I apologize a little bit for my enthusiasm. I am trying to have you understand how really important it is, and in Texas we believe in winning. We do not believe in holding actions or fighting a losing cause.

We do not believe our country is in bad shape. We do not believe our boys and girls are in bad shape. We think we have the greatest country in the world. We fought two wars on two fronts.

Our gross national product today is greater than Russia's or anyone else's. Let us get with it with commonsense and solve the problems together and I think our country will be all right.

Thank you very much.

Mr. DE LA GARZA. Commissioner, let me ask one question. You have applied or are applying for an experimental use permit on the toxic collar. Is that correct?

Mr. BROWN Yes, sir. The research of Mr. Connolly in the Interior Department is carried out on Mr. Howard's ranch. Mr. Howard will be testifying tomorrow.

If we can use that we will stop the killer coyotes and there will still be plenty of coyotes left.

Mr. DE LA GARZA. Thank you very much.

Mr. WAMPLER. Let me just say this. You were somewhat apologetic for your lack of brevity. I have never known a Texan to be a person of a few words. [Laughter.]

Seriously, in Virginia we pride ourselves on the fact that so many Texans came from Virginia. It is a matter of historical note that Stephen Austin was born in my congressional district and Sam Houston was born not too far away in the valley of Virginia. Our former distinguished chairman of this committee, Mr. Poage's grandfather was born in Virginia. Bob always said he had the good judgment to go to Texas at a young age.

We have a close feeling for people in Texas and we know—

Mr. BROWN. Bob Poage is a dear friend of mine of more than 30 years. I was at Baylor with you. I remember meeting you, sir. The only thing I can say is that I am briefer than Bob Poage. [Laughter.]

Mr. DE LA GARZA. Thank you very much. I would like to mention that I had a grandmother named Virginia. [Laughter.]

Mr. WAMPLER. We will take judicial notice of that.

Mr. DE LA GARZA. The committee will stand in recess until 2 p.m. [Whereupon, the committee stood in recess.]

AFTERNOON SESSION

Mr. DE LA GARZA. The subcommittee will be in order.

The first witness is Mr. David Flitner, president of the Wyoming Farm Bureau. We welcome you and will be happy to hear from you at this time. Without objection, your full statement will appear in the record. If you would like to, you may summarize it.

STATEMENT OF DAVID FLITNER, PRESIDENT, WYOMING FARM BUREAU, REPRESENTING AMERICAN FARM BUREAU FEDERATION

Mr. FLITNER. Thank you very much, Mr. Chairman.

If that is agreeable, I will proceed on that basis.

As my statement indicates, my name is Dave Flitner. I am a full-time farmer and rancher in Wyoming and I am also president of the Wyoming Farm Bureau.

I am here this afternoon representing the American Farm Bureau Board of Directors. I think I was probably chosen for this responsibility because of the fact that our own operation in Wyoming has been impacted by predators to the point that it has caused us in the past year to phase completely out of the business.

Because of our extreme interest in this particular issue, as individuals and as a large general agricultural association, I want first to state, Mr. Chairman, that I compliment you for the legislation we are looking at and analyzing today. We feel that this is the type of leadership that we in agriculture have been waiting for.

I would also like to recognize, even though he is not here at the moment, the efforts of Congressman Wampler. I would also like to express my appreciation to Congressman Marlenee of Montana who is not a member of this committee but was here this morning. We certainly appreciate his interest in this subject.

As I said, I am a full-time farmer and rancher and, I guess you might say, part-time president of the Wyoming Farm Bureau. In 1904 our family came from the New England area and established a ranch in northwestern Wyoming. At that time we were solely a cattle operation.

In about 1930 we diversified and also went into sheep. We did so for several reasons, one of which was to utilize the type of grass habitat that is evident in that part of the State more efficiently. As I think was brought out here this morning, the sheep use the rather unfortunate tailings, you might say, of the western ranges such as dandelions and other weeds. That makes it possible for the coarser grasses to thrive in greater abundance, making them available for other domestic, heavier footed livestock and wildlife.

We maintained a ranch on this basis, with sheep and cattle, from 1935 until about 1975 when we started to phase out of the sheep business as the result of extreme predation. I will not go into that except to say that we ran 2 to 2½ bands at one time which amounted to something over 1,000 head of ewes in each band.

We could see that the predatory animal problem was such that we could not justify two bands of sheep and, as I said, we phased down in 1975.

In 1979 we tried one last attempt to survive in this business and we failed. We failed because we took a 500-head loss in our operation in lambs alone, not counting ewes, from predators.

I am here this afternoon as somewhat of a living testimonial to the fact that we, in the western part of America—and I have talked to many people around the United States with regard to this predator pressure and find it is everywhere. They are having problems of hogs being killed in Iowa. They are having problems in the Southeast in places like Louisiana. We are having tremendous problems in the West.

In Montana cattle are being killed—calves, sheep, and, of course, wildlife are also being impacted.

I guess I am before you, Mr. Chairman, and your committee in a somewhat frustrated attitude. I think I reflect the kind of frustration, if not nearly despair, that is experienced by people who are trying to produce food and fiber in our society.

If it is, indeed, in the national interest to elevate predators to a status above those of us who produce food in the United States of America, then I think it should be so stated and we should be told forthwith that we, who try to produce food, are a secondary commodity.

We have seen the Animal Damage Control Act of 1931, which revised the lethal potentials for eliminating coyotes, changed by bureaucratic repeal. Therefore, I feel I am before this subcommittee unnecessarily because I do not think that was the intent of Congress.

I gather, from what I have heard here this morning, that this is certainly not your philosophy, Mr. Chairman. Nevertheless, it has impacted our industry to the point where some of us have been driven out of the business.

Maybe people or society in general can say: Well, what difference does it make if we do not have the opportunity to raise sheep and goats and if it even becomes more difficult to raise cattle or wildlife in the United States?

In answer, I say that I do not think it is in the national interest to have a society based on nonproductivity. I think that it is time that society in general decided on some priorities.

I, myself, have never killed a coyote in my life, but I have been responsible for alerting the professionals who are charged with that responsibility so that they could try to reduce the coyote population so that we could survive.

The members of this committee who were here this morning, I believe, could have sent their children, not knowing how many they have, to nearly any college in the United States on the amounts of the losses we have incurred in one valley in northern Wyoming over the past 10 years. I think that it is time that society in general come to our assistance and try to give us some kind of relief with respect to this matter. I believe it is time to establish some priorities so that we are not disenfranchised for the fact that we happen to be the producers of red meat in America.

Mr. Chairman, you have my full statement. This summarizes some of my concerns and I would be happy to try to answer any questions you may have.

Mr. DE LA GARZA. Thank you very much, Mr. Flitner.

Your statement will be included in the record at this point.

[Statement of the American Farm Bureau Federation follows:]

STATEMENT OF THE AMERICAN FARM BUREAU FEDERATION
BEFORE THE SUBCOMMITTEE ON
DEPARTMENT INVESTIGATIONS, OVERSIGHT AND RESEARCH
OF THE HOUSE COMMITTEE ON AGRICULTURE
WITH REGARD TO H.R. 6725, ANIMAL DAMAGE CONTROL ACT OF 1980

Presented by
Dave Flitner, President, Wyoming Farm Bureau
and Member of the AFBF Board of Directors

April 16, 1980

Mr. Chairman, thank you for this opportunity to appear before this committee on the subject of federal predator control policies.

The American Farm Bureau Federation is a general farm organization with over 3 million member families in 49 states and Puerto Rico. Farm Bureau members are engaged in the production of virtually every commercial agricultural product marketed in the United States, including the production of cattle, sheep and goats.

We were completely dismayed when the Secretary of the Interior announced on November 9, 1979, a revised federal policy on the control of damage to livestock caused by predatory animals, primarily coyotes. The Secretary chose to ignore fact and reason in favor of idealistic passion by eliminating lethal control measures. The result is the loss of any real protection against predators, especially for the livestock producer in the West whose animals graze the remote areas of the public lands.

The Animal Damage Control Act of 1931 directs the Secretary of the Interior to control predators by both lethal and nonlethal methods for the protection of livestock. Congress has, over the years, expressed its ongoing concern for an effective federal animal damage control program. For fiscal year 1980, Congress budgeted over \$17 million for the program.

The revised predator control policy effectively repeals the 1931 mandate and establishes a new predator protection law. Instead of controlling predators, the Department of the Interior proposes that livestock be controlled. This is readily apparent in the President's 1977 Environmental Message to Congress, wherein he said, "Because we now realize the importance of the role that predators play in various ecosystems, our goal should not be to destroy them but to reduce the occasion for their conflict with livestock."

In other words, we are going to keep livestock away from predators. We are going to remove livestock from those places where the predatory animals roam.

We see no other interpretation. Coyotes are not respectful of intangible boundary lines--nor many tangible boundaries for that matter--so we can't set aside a predator reservation for them and another for livestock. Neither can you herd coyotes to keep them separated from livestock.

In the case of coyotes, nonlethal control measures are about as effective as serving cease and desist orders. Thus, under the proposed policy, the only way to prevent the coyotes predation on livestock is to not have any livestock.

In the western states where the federal animal damage control program operates, eliminating the occasions for predator conflicts

With livestock means removing livestock from the public lands. If one considers the overall direction of public land management by the federal government today--to exclude any use of public lands in favor of wilderness preservation--getting livestock off the public lands may very well be a major objective of the revised predator control program.

Look at the specific policy goals enumerated in the revised policy statement. In policy goal number 1, preventive control measures would be limited to specific situations where unacceptably high levels of losses have been documented during the previous 12 months.

This policy goal statement assumes that certain levels of livestock loss are acceptable, when in fact no loss is acceptable. It also implies that, for at least the first 12 months, no preventive controls would be available to the livestock producer from the federal animal damage control program.

Policy goal number 2 says that if control measures are ever deemed appropriate, nonlethal methods only should be employed and then only against offending animals. In other words, first we get a conviction and then we harass the culprit.

Goal number 3 specifies that conflicts between predators and livestock should be solved through husbandry techniques which decrease exposure of livestock to predators. This means the removal of livestock from the realm of the predator, especially public lands.

Goal number 4 would extend the availability of extension program services. There would be nothing to extend other than condolences, and someone upon whom the livestock producer could vent his anger.

Goal number 5 would deploy resources to locations and in seasons of need. Program resources have always been concentrated where and when needed.

Goal number 6 redirects and refocuses research to preventing predator damage. Once again, the federal government is proposing studies rather than action. Years of study have already proven that nonlethal control measures are ineffective and the obvious direction of the studies is to elevate predators to the position of the animals protected by the animal damage control program.

The statement of revised policy then goes on to eliminate the predator control practices of denning, aerial shooting, traps and Compound 1080. In the light of the Environmental Impact Statement prepared on the animal damage control program, these measures are the only effective measures available but are objectionable to a certain element of our society who view predators, especially coyotes, as fun-loving Walt Disney characters.

If these and other lethal control measures were to be removed predators, especially coyotes, would abound. Livestock production, especially sheep, would dramatically decrease. It has already. In 1950, there were some 30 million head of sheep in the United States. Today, there are only about 12.5 million. One of the major causes for the reduction is the federal government's progressive limitation on lethal predator control measures.

Mr. Chairman, Farm Bureau finds the revised federal predator control policy contrary to existing laws and we support current legislative efforts that will restore lethal controls to the federal animal damage control program as soon as possible.

MR. DE LA GARZA. I do have a couple of questions.

First, let me say how sad it is to hear stories like yours. They have been repeated throughout the area where the sheep and goat industry used to be. We, here, are trying to do something that will help within the scope of the concerns of other people.

Was your production replaced by someone, to your knowledge, or when you went out of the business was that production simply lost?

MR. FLITNER. In a sense, Mr. Chairman, our production is being replaced. We are transferring our production from sheep to cattle.

We had cooperated with specialists from Australia and the most eminent sheep producers in America to try to evolve the finest animal available anywhere in our part of the United States. We did this for 35 years. So, it was with a great deal of anxiety that we finally threw in the towel and decided to abandon it when it became so evident that we could not survive. Last year, in lambs alone, we had a \$30,000 loss to coyotes.

Mr. Chairman, I know that there are people in this room, all across America, and in my own hometown who do not believe this, but the sheep industry in my locale, in my State, and in many other areas is evidence in itself. It is being eliminated. It is certainly being eliminated in my area where there are only two operations left, and there used to be 10 or 15 years ago.

MR. DE LA GARZA. Is it true that the production from those operations that have fallen by the wayside is just lost?

MR. FLITNER. Yes, sir. That production of sheep is lost.

Also, the employment in our sheep operation, although we were not a large sheep operation with those two bands, but we did have a round-the-clock lambing operation and employed about seven full-time people for 2½ to 3 months, is lost. The beneficial monetary impact on the local community and on employment opportunities are lost, as well as the resource.

The most damaging loss, in my view, is the fact that those western ranges lend themselves to the raising of sheep. From a conservation standpoint it is beneficial to the range to have both sheep and cattle browsing because of the weeds that they eliminate.

When we finally made the decision to remove ourselves from the sheep business we thought that we would see a decline in the productive capability of the land because of the fact that we would not be eliminating some of the undesirable grasses, such as dandelions and other weeds.

MR. DE LA GARZA. Did you have any other predators besides coyotes?

MR. FLITNER. Yes, I did, Mr. Chairman. I hesitate to mention this, but we are impacted by nearly every predator in our region. We have sustained losses from bear. We have sustained losses from mountain lions. We have sustained losses from golden eagles.

Of the 500 head that we lost last year, we lost, conservatively, 300 head of baby lambs to golden eagles. I would not have believed this before, Mr. Chairman, had I not seen it with my own eyes.

We lost 300 head of baby lambs to golden eagles while they were lambing on the range within 15 miles of our ranch headquarters. We moved that herd and docked and branded the lambs. We took them

to our private pastures on the Big Horn Mountains and we lost 200 head, so in total we lost 500 head to predators this past year. That does not account for any adult ewes which were not, as I said, included in the tally.

Mr. DE LA GARZA. What is the size of the range where you had your sheep?

Mr. FLITNER. In the area where the eagles were a problem, Mr. Chairman, our range is divided into three pastures. That particular pasture is 13 square miles.

As you well know, Mr. Chairman, golden eagles are a national symbol. They are on the endangered species lists.

When we saw what was happening, my father, who is 79 years old, rode out with me and we witnessed in a half a mile 12 dead baby lambs. When we gathered the sheep, in one day we saw 43 baby lambs who had been killed by golden eagles.

My father said—he had been raised in that country—"That is enough. We cannot afford to be the sacrificial lambs for society any longer." He said, "I think it is time that we sacrifice our legacy of production to society. God help them!"

Mr. DE LA GARZA. Then in that area, basically for the reasons which you have so well described, the sheep and goat raiser is the endangered species rather than other wise. Is that so?

Mr. FLITNER. That is correct, Mr. Chairman, and it is very unfortunate for America that we have elevated any type of predator to this kind of status in America.

What has built this great country is the ability of people to produce. There is nearly despair in my part of the country with respect to the fact that on every side government is pressing down on people like me and others who are trying desperately to produce food and fiber and other things for America.

For some bureaucratic or other reason, constraints by government are frustrating us at every turn. It is destroying America, Mr. Chairman. You know it as well as I do.

Mr. DE LA GARZA. Of course, on that 13 square miles you would have to build a cage to keep the eagles out, but were you to fence with a predator-free fence, if there is such a thing, what would be the cost?

Mr. FLITNER. Mr. Chairman, we considered all avenues in an effort to try to salvage this genetic legacy of which we were so very proud. The cost that would be associated with the type of fences, including electrical fences—we have friends in Australia that use electrical fences—would be so horrendous.

As the commissioner from Texas mentioned this morning, the coyotes still have the ability to dig underneath the fences. It is not even within the realm of economic feasibility to consider it in any detail because the cost would be so prohibitive.

In the one 13-square-mile pasture there is approximately 8 miles of fence and in the total perimeter there are probably 20 or 30 miles. This sounds like a tremendous operation, Mr. Chairman, but it is a great deal like much of Texas and much of our western country. It takes 20 acres per cow per month.

If we were not utilizing this resource of land, Mr. Chairman, it would essentially be laid waste from a grass standpoint. Deer are not there. Elk are at higher elevations. Those of us that happened to use

this type of country have fenced it in in order to try to get something beneficial out of that land.

When you consider the economics of any type of fencing, because of the vast number of acres required per animal unit, it is not feasible.

Mr. DE LA GARZA. In the area where you had the sheep, can cattle be brought in?

Mr. FLITNER. We have brought cattle in, sir. We are phasing cattle into the operation but much of it is salt sage country that lends itself to sheep. There is not the opportunity to capture very much water. The time that sheep utilized the area was in the winter time when there was snow there and they would do very little damage to the range under proper management.

We flew the country this past week to check to see if there was adequate water to use in the pasture which would allow us to range rotate some of the other pastures. We found that there was not adequate water this year to use that 13 square miles.

I guess you might say, depending upon the year we are being denied the opportunity to use part of a resource that we have previously used on a regular basis with sheep.

Mr. DE LA GARZA. You have stated that otherwise there would be no utilization at all in that area at those elevations.

Mr. FLITNER. It will depend upon the rain. If there is not enough rain to fill the reservoirs we will not be able to use them. This year, it looks like we will not be able to use that. If we do use it, it will result from the fact that we have rain from this point onward, which we are not very likely to have.

Normally those reservoirs are filled by snow and we did not have any amount of snow in this part of Wyoming this past year.

Mr. DE LA GARZA. Thank you, sir.

Mr. Wampler?

Mr. WAMPLER. I have a brief question, Mr. Chairman.

Thank you, Mr. Flitner. I am sorry I was delayed in arriving at the committee meeting this afternoon.

Let me ask you one question. There appears to be a good deal of controversy over how you quantify or prove or document the losses of livestock resulting from a particular predator. I can appreciate your emotional response and your father's when you perceived your loss.

You attribute your losses to the golden eagle. Will you tell me how you can determine what predator or type of predator killed your animals?

Mr. FLITNER. Yes. First of all, we had these sheep in a particular area on a given date and we would occasionally lose a ewe to natural causes. When first we saw the golden eagles, they started to move in and eat the ewes, which was no problem. That was fine.

On May 20, a year ago, the ewes were to lamb and they began lambing. We noticed immediately that the eagles diverted from even the carrion that was left, the ewes that had died, and we did not understand why. We had never had any previous experience with this type of predation from eagles.

We started to fly the country and ride in on horseback in an effort to see what was happening. This is when the incident took place in which I took my father out there with me. We started to find carcasses of lambs with the marks on them.

We had a man out there for cattle, because we run cattle and sheep together, and at one point in time—sir, I hesitate to mention eagles because I know very well how emotional an issue they are—this man saw an eagle come down and pick up one of these young lambs, take him up to an altitude of about 100 to 150 or 200 feet, his estimate, and drop him. The lamp dropped on the ground. Of course, that killed it. The eagle swooped down, picked him up, and took him away. We do not know how many lambs we did not see, but we have been in the sheep business long enough to know how many lambs should have been produced in that environment given the shape the sheep were in.

We saw carcasses in the amounts that I have mentioned here. We tried to get into the area every 2 days and not disrupt the sheep. This is our best estimate of what happened.

I believe, in all sincerity and in all honesty, that it is a very conservative estimate.

Mr. WAMPLER. I have one other quick question.

Secretary Andrus in his memorandum, that has been discussed here today, among other things suggested: "In some cases, a return to traditional methods such as herders should be seriously considered and encouraged."

We heard the commissioner from Texas here this morning say that that was not very practical in Texas. What about in Wyoming? Would it be practical there?

Mr. FLITNER. No; it would not, sir. A sheep herder is almost as endangered as are sheep in this day and age. You cannot find one that is capable and competent to do the job. There are so many other social programs that are available to people to replace productive effort in our society today that many people who would normally herd sheep have gone into this type of program.

It is nearly impossible to get them from overseas and across borders because that has been frowned upon by our society. It is extremely difficult to find anybody who would go out with a band of sheep.

We used to take two or three people who would take the sheep out in January or February and would come in the next March. There are not too many people in our society today that are willing to do that.

It is not, in my view, unless there is a liberalization of the laws that prevent people from coming in from outside the United States, practical to do. That is probably the only salvation.

In fact, Congressman Wampler, it is becoming more and more difficult in America today to even get the sheep shorn. There is tremendous pressure to keep Australian sheep shearers out. As a result of that, people who are trying to shear sheep and provide this service for what is left of the sheep industry are having tremendous problems in the labor area.

Mr. WAMPLER. Thank you, Mr. Chairman.

Mr. DE LA GARZA. Thank you very much, sir, for your very forthright testimony.

Mr. FLITNER. Thank you, Mr. Chairman, and gentlemen.

Mr. DE LA GARZA. The next witness is Mr. Charles Boothby of the National Association of Conservation Districts.

We welcome you, sir, and will be happy to hear from you at this time.

**STATEMENT OF CHARLES L. BOOTHBY, EXECUTIVE SECRETARY,
NATIONAL ASSOCIATION OF CONSERVATION DISTRICTS**

Mr. BOOTHBY. Thank you, Mr. Chairman, members of the committee. I am Charles L. Boothby, executive secretary, National Association of Conservation Districts.

NACD represents nearly 3,000 conservation districts in the 50 States, Puerto Rico, and the Virgin Islands. Conservation districts are established under State statutes to develop and implement programs for the conservation of soil, water, and related resources within the district boundaries. Districts are working directly with over 2.5 million private landowners and operators.

Because of periodic and localized imbalances in predator-prey relationships in many areas of the country, conservation districts have become concerned about the animal damage control programs of this Nation. This concern is expressed in our policy position statements which follow.

The advance of civilization has often created an imbalance of predator-prey relationships in wildlife and has created conflicts in the raising of domestic animals.

Although broad-scale, nonselective predator control programs are not ecologically sound and are in many cases uneconomical, specific predator management programs, both on public and private lands, are both feasible and necessary.

NACD supports predator control measures implemented within accepted principles of wildlife management for the purpose of maintaining proper predator-prey relationships. We believe that in some instances the use of chemical toxicants by trained professionals, particularly compound 1080, may be the most humane and economical method of predator control.

We call for increased attention to the predator problem and ask the Federal Government to provide additional research into methods of control, increased assistance to individual producers plagued by predator damage, and continued reassessment of the wisdom of banning proven methods of control, keeping in mind the need for more efficient and humane predator management programs and procedures.

We support the concepts of H.R. 6725, although we have some reservations about some of the specific provisions. We question whether it is a vehicle which will actually improve predator control activities and effectuate actual improvements in predator control.

The bill does not address the emerging issue of biological control of predators, an issue that needs greatly increased research and development. We recommend inclusion of provisions to authorize such research and development, perhaps as a section 3(a)(6), to read: "Undertake applied field research relating to biological controls and techniques, including the economic and environmental effects of such controls".

An alternative would be to insert the words "and biological" following the word "nonlethal" on line 14 of page 3.

The bill does not authorize a specific and separate appropriation. We believe that a separate appropriation would give the program the priority it deserves. If the funding of this program must be from

funds diverted from other programs, we doubt if much progress will be made.

We recommend the following language: "Sec. 5 There is hereby authorized to be appropriated such funds as are necessary to carry out Section 3 of this Act."

We do realize that the Department of the Interior does have a separate appropriation for animal damage control at present.

Section 3(a) authorizes the use and additional research on the use of compound 1080 for animal damage control. This will, in effect, overturn recently announced Federal policy discontinuing research on the chemical. The language in the bill is, we believe, appropriate until such time as better control methods can be devised.

Section 4 of the bill requires the Secretaries to submit yearly progress reports on the development and implementation of the program. We question whether such frequent reporting is necessary. Research takes time and results are infrequent. Assessment of control programs also is a longer term matter. We believe that biennial reporting would be adequate and is in keeping with the schedule proposed for the activities of the ad hoc committee provided for in section 3(b).

It should be stressed that this program of animal damage control is necessary and will be conducted on both Federal and non-Federal lands.

This completes our prepared statement. I would be glad to entertain any questions you may have.

Mr. DE LA GARZA. Thank you very much, sir.

Mr. WAMPLER. I have no questions.

Mr. DE LA GARZA. We appreciate your suggestions. I do not anticipate any great problem in adding "biological" to our bill. That is very much appreciated.

The reason for the nonappropriation is that we have some budget-time schedule problems. If this bill were to move, it has to move without impact on the budget beyond the time limit, but we appreciate your interest and that suggestion.

I think that, with the committee, we can work out changes commensurate with your excellent recommendations.

Thank you very much, sir.

Our next witness is Dr. James Bowns of Southern Utah State University. We welcome your being here and all the excellent work which you have done in this area.

We will be happy to hear from you at this time.

STATEMENT OF JAMES E. BOWNS, RANGE ECOLOGIST, BIOLOGICAL SCIENCES, UTAH STATE UNIVERSITY AND SOUTHERN UTAH STATE COLLEGE

Mr. BOWNS. Thank you, sir.

Mr. Chairman and members of the committee, my name is James E. Bowns. I am a range ecologist, sharing a joint appointment with Utah State University and Southern Utah State College, where my responsibilities involve research which has included predator damage assessment, teaching, and extension.

I was a member of the Animal Damage Control Policy Study Advisory Committee appointed by Secretary Andrus in 1978. I am presently a member of the WRCC-26, Western Regional Coordinating

Committee, entitled "Management of Predators and Relation to Domestic Livestock," and I am the immediate past chairman of that committee.

I have submitted my written testimony and I will now summarize my remarks.

Mr. DE LA GARZA. Thank you, sir. Without objection, your full statement will appear in the record.

Mr. BOWNS. The livestock industry of the West is dependent upon rangelands for the majority of the livestock's forage. Predation is one of the most serious problems facing this industry on these lands.

The losses reach levels which prevent proper use of rangelands and proper utilization of forage. The rangelands are the world's largest land resource. They include approximately 47 percent of the land surface of the Earth, 63 percent of the contiguous United States, and 86 percent of my home State of Utah.

Physical features, such as rough topography, poor soils, lack of moisture, et cetera, prevent these lands from being intensively used. Their contribution is direct in terms of livestock production and indirect because vegetation management affects water yield, biological stability, and environmental enhancement.

Livestock grazing is compatible with, and even beneficial to, other uses of the range and is a part of multiple use of the range and an important use of rangelands. Food production can be obtained from rangelands only through the grazing animal. These ruminants are able to convert plant materials to meat that would otherwise be wasted.

They also provide other products, such as leather, wool, hair, lanolin, essential enzymes, and pharmaceuticals. Range livestock production requires considerably less cultural energy in the forms of labor, manufacture of machinery, transportation, tillage, fertilizers, and herbicides for the production of fiber and food.

This food production is complementary to humans rather than competitive. As world populations grow and the demand for grain and energy increases, there will be a greater shift to reliance on forage and less reliance on grain to produce food that ruminants are capable of supplying.

Studies have shown that sheep and goats are more efficient producers than cattle. This is as a result of: Multiple births, faster growth rate, ability to fatten to choice—what we term grass fat—without grain, the ability to utilize steep rugged terrain and ranges with limited water, as Mr. Flitner indicated, and they utilize greater proportions of browse and produce a dual crop of wool or hair and lambs or kids.

I would like to support a statement that Mr. Flitner made that on many of our western rangelands, the best use of those lands is with common use—sheep, goats, and cattle.

Sheep and goat numbers have decreased and cattle numbers have increased during the past three decades. This has been largely due to the cost of operations, lower market prices, and predation. Sheep and goats are also effective for the control and/or manipulation of vegetation. Goats have been effective in maintaining shrubbery growth on firebreaks in California. The firebreaks are used for better fire management by breaking up the large stands of brush.

Regrowth following construction is immediate and abundant and maintenance with herbicides and mechanical equipment is difficult and costly.

Goats have also been effective in controlling regrowth of treated gamble oak in Colorado. In Utah we have used goats to manipulate black brush and convert it to a form more palatable, digestible, and nutritious for cattle.

Sheep have been used successfully to reduce sage brush density and rehabilitate seedings of grasses that we have throughout the West and to reduce herbaceous species and leave browse plants for deer.

Sheep are also useful to remove certain herbaceous species, not desirable for cattle grazing, therefore releasing desirable grasses. Goats are used, as has been mentioned today, extensively in Texas to control woody plant growth. They can be used to control low-growing brush or as a followup control of browse.

This biological control of undesirable plants produces food and fiber and minimizes fossil fuel use. In recent years low mohair prices and predation have caused a decrease in goat numbers. That has also been indicated previously today.

In recent years predator losses have contributed to entire flock liquidations. Mr. Flitner referred to that.

On the fringes of goat producing areas, predators have increased to the point where reestablishment of goat herds will be difficult.

USDA studies also indicate that sheep and goat producers are being forced out of the business because of predators. Discouragement because of predator losses and frustration over restraints on control are common with sheep and goat producers.

Losses to predators take several forms, the most obvious and dramatic being the direct killing of livestock, but other losses include reduced animal production because of molestation, reduced production because of efforts to evade losses such as increased incidence of parasitism because of close confinement—someone else will address that in more detail—cost of supplement feed, cost of gathering and treating animals following predator attacks, direct costs of control efforts, reduced attention to other phases of farmers and ranchers, and probably the most serious, the inability and unwillingness of ranchers to produce sheep and goats in areas where they are well adapted because of excess predator losses likely to occur.

This discussion has emphasized the predator losses to sheep and goats, but predation is also a serious problem with cattle. Cattle losses, however, are somewhat sporadic, regional, seasonal, and are not well documented at this time. This subject will be more thoroughly treated by other witnesses.

It is the sheep and goat industry that suffers the greatest loss and has borne the greatest burden of justifying and conducting damage control programs. Wildlife should also be considered in this discussion, as they benefit from proper grazing management.

Careful planning, including specialized grazing systems and vegetation manipulation, can increase returns from both wildlife and livestock. Predator control programs designed to protect livestock can also benefit wildlife. Studies have shown that decreases in coyote populations have increased in increased numbers and diversity of other mammalian predators.

Coyote predation has also been shown to be a significant factor in the reproductive success of antelope, mule deer, white-tailed deer, turkeys, and bighorn sheep. Some biologists feel that there is little doubt that predators can exert significant effects upon populations of large game animals.

In summary, good range and livestock management is beneficial to the range resource and livestock and wildlife. A variety of products that are useful to man can only be obtained from rangelands through the grazing animal. These products can also be obtained with a considerable saving of energy compared to intensive agriculture.

Livestock and wildlife can be efficiently produced on our western rangelands only with proper management and husbandry practices which include an effective predator management program. The program should include all methods to protect livestock, including herders where feasible, fencing, penning at night, shed lambing, et ectera.

Policymakers should be aware, however, that in general producers currently employ all of the available and practical nonlethal and non-capture methods. Unless these methods are supplemented by the removal of predators, particularly in sheep, goat, and cattle areas, the predators respond by changing their killing patterns or moving to other ranches.

Effective control of predation in the Western States requires the application of all possible methods of control including selective toxic chemicals and other methods as appropriate to local situations.

I appreciate the invitation to speak to you today. If you have any questions, I will be happy to respond to them.

Mr. DE LA GARZA. Thank you very much. Your full statement will be included in the record at this point.

[The prepared statement of Mr. Bowns follows:]

STATEMENT OF DR. JAMES E. BOWNS, RANGE ECOLOGIST, UTAH STATE UNIVERSITY,
LOGAN, UTAH, AND SOUTHERN UTAH STATE COLLEGE, CEDAR CITY, UTAH

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Predation on livestock in the western United States is one of the most serious problems facing the range livestock industry. Predation causes very serious economic losses to many producers forcing the abandonment of a substantial number of livestock operations. These losses also reach levels which prevent proper use of range land, and the proper utilization of forage resources by livestock.

Range lands are the worlds largest land resource accounting for approximately 47% of the land surface of the earth, 63% of the contiguous United States, and 86% of my home state of Utah. These range lands are not suitable for intensive land use because of rough topography, severe temperatures, rocky, shallow or salty soils, or lack of moisture. The contribution of these rangelands to national and world food supplies is direct, in terms of the production of livestock products, and indirect since vegetation management affects water yield, biological stability and environmental enhancement. As populations increase our rangelands will be subjected to increase demands for food production and other uses (Thomas, 1980).

In addition to the products produced through livestock grazing this use is beneficial and often required as a tool to maintain desirable forage conditions for wildlife. Livestock grazing can also be compatible with, and even beneficial to, other uses and values of the range (Anderson, 1980).

The Society for Range Management, an international organization of range scientists, range ecologists, range managers and ranchers, supports the concept of multiple use and livestock grazing as an important use of rangelands.

Grazing by animals is the only way that millions of acres of rangelands can be harvested for food production. These animals, ruminants, are a special class of animals which include cattle, sheep, goats, deer, elk, and buffalo that have, as part of their digestive process a microbial fermentation stage

in which plant materials such as grass are broken down to usable nutritional forms. This unique ability enables ruminants to convert, to meat, milk or other human food, many plant materials and industrial byproducts that would otherwise be wasted (CAST, 1975).

In addition to producing food, ruminants also provide other products useful to man such as leather, wool, hair, lanolin, essential enzymes and pharmaceuticals such as insulin (CAST, 1975).

Range livestock production requires considerably less cultural energy (labor, machinery, transportation, tillage, fertilizers, herbicides, etc.) for the production of meat and fiber than that required in confined fattening procedures (Cook, 1976). Food production by ruminants is also complementary to humans rather than competitive (Hodgson, 1976). As the population grows and as world demand for grain and energy increases there will be a shift to greater reliance on forages and less reliance on grain to produce the foods that ruminants are capable of supplying.

When comparing the relative efficiencies of the various classes of ruminants it has been found that sheep are considerably more efficient than cattle. This is a result of multiple births, faster growth rate, and the ability to fatten to choice meat grade on range forage without grain (Cook, 1975). Sheep and goats are also more efficient on many western rangelands because they are well adapted to use steep, rugged terrain, ranges with limited livestock water, and utilize greater proportions of browse and other species not acceptable to cattle.

Another benefit conferred by sheep and goats is the dual crop of wool or mohair, and lambs or kids they produce. However predation, cost of operations, and lower market prices have caused sheep and goat numbers to give way to increased cattle numbers during the past 3 decades. The most effective use of

many rangelands, however, can be accomplished with common use by cattle, sheep, and goats (Cook, C.W. 1954).

Sheep and goats are also very effective in the control and/or manipulation of vegetation. In southern California fuel breaks are constructed in the chaparral type to break up the vegetation for better fire management and to facilitate protection of urban areas and watersheds. Regrowth from construction of these firebreaks is immediate and abundant and maintenance is difficult and costly. Goats are currently used to control this regrowth of shrubs and goat grazing is an alternative to herbicides and other control methods (Green, et al., 1979).

Goats have been effective in controlling gambel oak in Colorado as a followup treatment to mechanical control (Davis et al., 1975). Goats have also been utilized in Utah to manipulate blackbrush and convert it to a form more palatable, digestible, and nutritious for cattle use (Provenza, 1980).

Sheep are also being used to reduce sagebrush density and rehabilitate grass seeding and to maximize utilization of herbs and leave browse plants for deer winter forage (Jensen, et al., 1972). Sheep have also been successful in removing certain herbaceous species not desirable for cattle grazing and therefore releasing desirable grasses.

Goats are used extensively in Texas to control woody plant growth. These animals can be used to control low-growing brush or as follow-up maintenance control of sprouts on brush that has otherwise been treated for initial control. Repeated defoliation of the plant will either control its growth and spread or kill it (USDA, 1964).

Goat browsing to control brush makes use of land and resources to produce food and fiber products that minimize fossil fuel use and that are not in direct competition with man for food and plant production.

Goat numbers, in Texas, fluctuate as a result of product price fluctuations and weather influences. Low mohair prices in the mid 1960's and early 1970's were the major reason that angora goat numbers decreased, but predator problems were a strong second factor. In recent years losses to predation have contributed to entire flock liquidations (Kensing, 1978). In many fringe areas predators have increased to a point where reestablishment of goat herds would be difficult.

Studies have shown that sheep and goat producers are being forced out of business because of predators. Discouragement because of predator losses and frustrations over restraints against strong corrective actions has been found among former producers as well as those still in business (Gee, et al., 1977).

The most obvious and dramatic loss from predators is the direct killing of livestock, but losses occur in several other ways. These include: (1) reduced animal production because of molestation, (2) reduced production because of efforts to evade losses. An example of this would be parasite infestations as a result of close confinement, (3) supplemental feed for animals under confinement, (4) gathering sheep scattered by predator attacks and treating animals injured by predator attacks, (5) direct costs of control efforts, (6) reduced attention to other phases of the farm or ranch operation, and perhaps the most serious, (7) the inability or unwillingness of ranchers to produce sheep and goats in areas where they are well adapted because of the excess predator losses certain to occur (Wade and Connolly, 1980; Shelton and Klindt, 1974; Nesse, 1974).

This presentation has emphasized the impact of predators on sheep and goat operations, but predation is also a serious problem with cattle. The cattle industry is thought to suffer the greatest direct financial loss from predation but these losses are somewhat sporadic, seasonal, and regional and

are not well documented. When predation is expressed as a function of economic value it is the sheep industry which suffers the greatest loss. It is also the sheep industry that has borne the greatest burden of justifying and conducting damage control programs (Shelton and Wade, 1979).

Wildlife also benefit from proper grazing management. Studies show that with careful planning including specialized grazing systems and vegetation manipulation rangeland resources can be managed to increase returns from both livestock and big game animals (Bryant et al., 1979). This is true for non-game as well as game species.

Predator control programs may also directly benefit wildlife. When coyote numbers declined significantly between 1941 and 1951 significant increases in the populations of other mammalian carnivores were observed. This indicates increased numbers of and diversity of other predators when coyote populations are suppressed (USDI, 1978). Studies have also shown that coyote predation is a significant factor in the reproductive success of antelope, deer, turkeys, and bighorn sheep. Some biologist feel that there is little doubt that predators can exert significant affects upon population levels of large game animals (Winkler, 1978).

In summary, good range and livestock management is beneficial to the land, livestock and wildlife. A variety of products that are useful to man can only be obtained from rangelands through the grazing animal. These products can also be obtained with a considerable saving of energy compared to intensive agricultural operations. Livestock and wildlife can be efficiently produced on our western rangelands only with proper management and husbandry practices which includes an effective predator management program. This program should include all methods to protect livestock, including herders where feasible, fencing, penning at night, shed lambing, etc. Policy makers should be aware,

however, that, in general, producers currently employ all these available and practical non-lethal, non-capture methods. Unless these measures are supplemented by the removal of predators, particularly in sheep, goat and calving areas, the predators respond by changing their killing patterns or moving to other ranches. Effective control of predation in the western states requires application of all possible methods of control including selective toxic chemicals and other methods as appropriate to local situations (WRCC-26, 1980).

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Mr. DE LA GARZA. Mr. Wampler?

Mr. WAMPLER. I have brief questions, Mr. Chairman.

Dr. Bowns, I want to thank you for coming today and sharing this statement with us.

I think your credentials are well known and certainly you are a recognized expert in the field in which you testified. Are you satisfied that the losses to the sheep and goat industry from predation are accurately and well documented and are as they have been presented to us today?

Mr. Bowns. Yes; I feel that they are. It is a tremendous problem in the West.

Mr. WAMPLER. I ask you also this. A portion of Secretary Andrus' memorandum reads:

There will be no further research and development of potential uses of compound 1080. However, research may be continued on other toxicants that do not have secondary effects, are selective and humane.

Do you agree with the conclusion that Secretary Andrus reached on the question of the need for further research on compound 1080?

Mr. Bowns. No, sir. I do not agree with that. I think that research should continue, particularly the work that they are doing on the toxic collar and probably beyond that. I do not agree with the ban on research with 1080.

I would be all for new toxicants if they could be developed, but it appears that there are none on the horizon at this time.

Mr. WAMPLER. I gather from your statement that you would feel that whatever research capability or resources the Department of the Interior, particularly the Fish and Wildlife Service, has should be devoted to further research on the uses of 1080 rather than going into some areas that may not be nearly as promising. Is that correct?

Mr. Bowns. Yes, sir. I think there is a great potential for the use of 1080 and I think that research should continue.

Mr. WAMPLER. Let me say also, as I indicated at the outset, you have had many years of experience working in agricultural research and extension and you feel this would be a high priority item, not only for the Federal Government but for State and local governments to consider as they set their priorities for research to address this very serious problem. Is that so?

Mr. Bowns. Yes, sir. I do.

Mr. WAMPLER. Thank you.

Mr. DE LA GARZA. Thank you very much, Dr. Bowns, for this very excellent scientific appraisal of the situation. From my personal viewpoint, your analysis of the situation is that except for the involvement of government, the sheep and goat industry would be alive and prospering but it suffers from the limitations that have been imposed by government.

Farmers and ranchers have not been able to take care of their herds. I think that the balanced way in which your statement presents the issue is certainly one of the most helpful that we will have in—we hope—arriving at a solution to this problem. We thank you for that presentation.

Mr. Wampler?

Mr. WAMPLER. Dr. Bowns, let me be sure that I understand the thrust of a statement that you made. I believe I understood you to say that in your opinion there is no other toxicant available at the present time that would be as effective as is 1080 for the control of predators. Was that your meaning?

Mr. BOWNS. Yes, sir. That is my understanding. There are toxicants they are looking at but nothing that has the promise that 1080 has. We have years and years of experience with 1080 that we do not have with these other compounds.

Mr. WAMPLER. So, it would be fair to say that many of the other toxicants that may be suggested or that may offer some hope probably would require as much or more research to develop as would be taken to continue the work on 1080. Would that be a fair statement?

Mr. BOWNS. I would say, yes. I would say they would require more research to develop than would 1080.

Mr. WAMPLER. We could, therefore, assume that it would cost more money to start in new fields of research rather than to complete that which is currently under way as it relates to 1080.

Mr. BOWNS. I would assume that. Yes, sir.

Mr. WAMPLER. Thank you.

Mr. DE LA GARZA. Are you acquainted with the studies being made of the toxic collar?

Mr. BOWNS. Yes, I am. I know Guy Connolly and Dale Wade very well. They are the ones actively involved in that research. I have followed it through the years.

Mr. DE LA GARZA. From your vantage point in the field—and I am sure that you have studied and analyzed their research—what would be your professional recommendation as to the use of the toxic collar with the 1080 compound?

Mr. BOWNS. I think it would be a very effective tool under certain conditions. I do not think it is a panacea or a cure-all, but I think it would be a very effective tool used in conjunction with other lethal methods as well as good range management and animal husbandry practices.

I think we need a good integrated program using all of those things. I think it is a very useful tool and I think it is at the point now where it could be used operationally.

Mr. DE LA GARZA. We appreciate that very much, sir. Thank you very much for being here.

Mr. BOWNS. Thank you, sir.

Mr. DE LA GARZA. Our next witness is Mr. Laird Noh of the National Wool Growers Association, Salt Lake City, Utah.

We welcome you, We appreciate your being here and we will be happy to hear from you at this time.

STATEMENT OF LAIRD NOH, CHAIRMAN, ENVIRONMENTAL COMMITTEE, NATIONAL WOOL GROWERS ASSOCIATION AND UTAH WOOL GROWERS

Mr. NOH. Thank you, Mr. Chairman and Mr. Wampler. We do appreciate the opportunity to be here.

I am today representing the National Wool Growers Association and also the woolgrowers of my own State. I am a sheep producer and feeder cattle producer in south central Idaho.

I also serve as cochair of the Sheep Producer Environmental Committee, which is a committee of western environmental interests and sheep producers involving six States in the West. I believe Mr. Symms has submitted for the record a letter which that committee officially drafted to Mr. Greenwalt expressing the sheep producer environmentalists' concerns about the Andrus animal damage control program.

With your permission, I will submit our formal testimony for the record, summarize it, and add a couple of comments.

Mr. DE LA GARZA. Very well, sir. Your full statement will appear in the record.

Mr. NOH. Over the years the Department of the Interior has indeed undergone a change in attitude toward their dual responsibilities of wildlife management and livestock protection. The 1931 Federal Animal Damage Control Act mandated the Secretary of Agriculture to control the predation of livestock, and in 1939 that responsibility was transferred to the Secretary of the Interior.

In the early 1960's Interior began to disregard this mandated responsibility and to place their wildlife resources at a higher priority than the protection of the agricultural resource. The effect of the shifting priority has been programs designed and nurtured to propagate large numbers of coyotes at the expense of sheep and other prey species.

We think that is a very important point.

Another point we think ought not to be overlooked is that hope held out in the area of nonlethal methods research. In 1966, 14 years ago, Assistant Secretary of Game, Fish, and Parks, Stanley Cain, testified before a Senate hearing as follows: "We will find answers through research on repellants, fences, and scare devices."

Then, again, in 1973, Assistant Secretary of the Interior Nathaniel Reed said: "A strong research effort will produce techniques that are both better and cheaper."

Now, is there any wonder that we have become dubious about non-lethal research. We have seen little yet of a positive nature. We thought perhaps we had not been informed of developments of these 13-year research efforts when we first read Mr. Andrus' policy statement, so in January the National Wool Growers Association requested from the Fish and Wildlife Service a list of appropriate livestock husbandry techniques which we might apply, as mentioned in the Andrus proposal.

Mr. John Rogers of that Department wrote back 2 months later: "We cannot provide such a list as requested in your letter."

There is no point in getting anybody too excited about these panaceas.

We would respectfully suggest that you consider the language in this bill be broadened to specifically include the use of lethal control methods on public lands. Executive Order 11643, issued by President Nixon in 1972, banned the use of toxicants on Federal lands and in Federal programs.

Federal lands are very important to sheep production and other livestock production. Subsequently, EPA, under the FIFRA, canceled the use of toxicants for use by anyone anywhere.

In light of recent data concerning compound 1080, we believe that these restrictions on public and private lands are arbitrary and unnecessary. Therefore, we respectfully request that you give consideration to some language to speak to the public lands question.

Both the Executive order and the environmental protection law contain provisions for emergency use of toxicants. Criteria for emergency use call for an annual livestock loss of 12 percent or more.

According to the study appended to my statement, one-third of the reporting 32 States had losses exceeding this figure in the years 1972 thruogh 1978. The States of Texas, Wyoming, Montana, and others have filed for emergency use on more than one occasion. The bulkiness of the procedure is demonstrated by the necessary approval of these emergency requests by the Secretaries of Interior, Agriculture, HEW, and the EPA.

If ever a bureaucratic nightmare existed, and granted there are many, this is certainly a classic.

Despite these filings, not one emergency request for predator control has ever been approved under the Executive order, although two such requests sliced very handily through the redtape to protect from coyotes and predators the whooping crane and Aleutian geese.

It is these types of frustrating inequities that fire the enthusiasm for the so-called Western Sage Brush Rebellion, or more preferably, the Sage Brush Bill of Rights. Westerners would prefer to take their requests to State governments rather than to face such senseless review by Federal agencies.

Mr. Chairman, I have been at this business too long now and this business has been in an awful turmoil since the Executive order of 1972. I suppose, if we have learned one thing, certainly out West, it is that we cannot effectively manage our natural resources and our wildlife resources with fantasy and wishful thinking and people who have no solid experience in how that ought to be done. We cannot do that successfully any more than you can cure the disease of cancer with a patent medicine program, however much we might wish it to be that way, it just does not work.

It is an awful irony, for instance, that there are literally dozens of toxicants readily available to any frustrated rancher which will poison coyotes. Compound 1080 was chosen by the scientific community because of its environmental qualities, not because it effectively kills coyotes, which it does.

Yet, here we have environmental considerations which are blocking the use of the product while dozens of things—as ranchers lose confidence in a professional program—are readily available.

The trouble with all the other products is that they do not just take care of coyotes, they take care of just about anything else as well.

The National Wool Growers Association has not, until now, favored any kind of transfer of responsibility to Agriculture. We realize the coyote is a wildlife resource. We felt that perhaps Interior would except its responsibilities to agriculture, but they have not done so. Repeatedly they have not done so.

Time and time again the opportunity has been provided and again and again they have failed.

The morale of the animal damage control people, we feel, is a disaster. The morale of the livestock community is a disaster. Any kind of organized professional animal damage control program is very rapidly disintegrating and perhaps has already passed the point of no return.

State associations are passing resolutions for the establishment of State programs. Individual ranchers are hiring their own individual animal damage control personnel.

We really see no route at this time other than to find some sort of strong new direction for the program. We certainly encourage the efforts that you are making. There is no doubt that something has to be done.

I do not find, in my travels, a single State wildlife management agency representative in the West, or any trained wildlife biologist, who has knowledge of predation by coyotes, inside or outside of the Interior Department, who agrees with this new policy put forth by Secretary Andrus, which policy was designed to solve the problem once and for all. It just has not.

We thank you very much for your efforts to find some solution to the problem. Clearly, something has to be done if it is not already too late.

Mr. DE LA GARZA. Thank you, sir.

Your full statement, without objection, will be made a part of the record at this point.

[The prepared statement of Mr. Noh follows:]

Statement of
LAIRD MOH, CHAIRMAN, ENVIRONMENTAL COMMITTEE
NATIONAL WOOL GROWERS ASSOCIATION
Before the House Committee on Agriculture
Sub-Committee on Department Investigation
Oversight & Research
At Hearings on H.R. 6725
April 16, 1980

Mr. Chairman and members of the Committee, I am Laird Moh, a sheep raiser from Kimberly, Idaho. I am also Chairman of the National Wool Growers Association's Environmental Committee. I am here today to speak on behalf of the 118,000 sheep and lamb growers in the United States.¹

The National Wool Growers Association is a federation of 29 member associations. My association is the oldest national livestock organization in the United States--organized in 1865. For the past 115 years we have sought to gain equitable treatment for our agricultural enterprise on matters affecting it. Our program emphasis in recent years has been the issue we are here to discuss today--predator control.

We know that the subject of animal damage control arouses emotions and is surrounded by controversy. But we also realize the absolute necessity of a program to protect our livestock from the ravages of predators--if we intend to maintain a viable sheep industry in the United States. We believe an effective and environmentally safe predator control program is embodied in H.R. 6725; and we compliment you for your work.

In 1959 we had 32 million sheep in the United States.² In 1969 we had only 21 million sheep in the United States.³ In 1979 we were down to 12 million head.⁴ This precipitous decline in the number of sheep and sheep ranchers was a combination of several factors, including: economics, man-made fibers, climate, reduction in grazing allotments and severe losses to predators. However, just this last year, in 1979, this trend was reversed. For the first time in 20 years sheep numbers increased in the United States.⁵ Granted, the increase was small, about 2½ percent, but it was viewed by people in the sheep industry as a significant achievement. It demonstrates that there is a continuing interest in, and an economic purpose for, growing lamb and wool products in this country.

It is significant, however, to look closely at the statistics on this increase in numbers. The average flock size in the states not showing an increase in numbers was 221 head. The average flock size in the states showing an increase was 94 head. The lamb loss in those 12 states not showing a decrease was 816,000 head. The lamb loss in the 19 states showing an increase was 608,000 head, or 26 percent less.⁶ Thus the increase in numbers is tied to states where smaller, more confined production is operable. In states where forage, terrain and other factors dictate a larger scale of operations, the losses continue to be substantial. We are pleased with the increase in sheep numbers, but we must not be lulled into a false sense of security. The threatened loss of these larger operations will reverberate throughout the industry resulting in a lack of supplies and equipment, health care products, markets, transportation and other supportive industry factors. Stabilization of the industry depends on the continued determination of people who husband sheep for a living and the help of leaders like yourselves.

There are other continuing problems, but the loss of sheep to predators--primarily the coyote--is among the most serious. In 1978 the loss of sheep and lambs by predation in my home state of Idaho was valued at over \$3 million.⁷ This figure is small in comparison to the value loss in Texas of \$16 million, or California at \$9 million, but it does represent 14 percent of the gross income of Idaho sheep and lamb producers. Nationwide the value is almost \$98 million.⁸ As an industry, our loss may not be as great as that incurred by Chrysler Corporation, but as a percentage of the total gross income from the sale of sheep and lambs, it amounted to just over 18 percent. It is our contention that the sheep business cannot continue to incur economic losses of this scope, particularly in the "decreasing" states, and maintain its economic viability.

Mr. Chairman, 275,000 pounds of lamb goes across American tables every day in this country.⁹ The 1978 loss of 28 million pounds of lamb represents enough lamb meat to provide table food for 220 million Americans for an additional 32 days each year.¹⁰

How can we justify such a wanton and unnecessary loss of food resources. At a point in time when domestic and world food demands are increasing, it is inconceivable to waste 14 thousand tons of meat intended for human consumption.¹¹ The opportunity to stem this waste is at hand, and we applaud your interest to assist us with this effort.

Over the years the Department of Interior has undergone a change in attitude toward their dual responsibilities of wildlife management and livestock protection. The 1931 Federal Predator Control Act mandated the Secretary of Agriculture to control the predation of livestock to protect our food and fiber base.¹² In 1939, that responsibility was transferred to the Secretary of Interior. In the early 1960's, Interior began to disregard this mandated responsibility and to place their wildlife resources at a higher priority. The effect of this shifting priority has been programs designed and nurtured to propagate large numbers of coyotes at the expense of sheep and other livestock. The result is evident in the increasing loss figures.

Prior to the completion of the Environmental Impact Study on the Animal Damage Control program, our Association asked for equal consideration within the Department of Interior for programs relating to livestock protection and to wildlife management. We had hoped that the Secretary would recognize the importance of a balanced approach. Apparently he didn't, because on November 8th Mr. Andrus announced a policy that was solidly biased in favor of predatory species. We felt that our stance was reasonable, and our indications from professionals in the Fish and Wildlife Service were that an equitable approach to the problem of predation would be sought through the E.I.S. process. Instead, several of our most effective tools are scheduled to be stripped from the program, and we presently find ourselves in a serious dilemma--one of increasing predation and reduced control techniques.

You have addressed this problem in H.R. 6725. We feel this legislation, when enacted, would result in significant reductions in annual losses. We support the use of proven lethal and non-lethal animal damage control devices, methods and chemicals

toxicants. We encourage extended research activities in lethal and non-lethal control techniques, as addressed in the Bill under Section 3.

In the area of non-lethal research, I'd like to point out an item of concern. In 1966, 14 years ago, Assistant Secretary of Game, Fish and Parks, Stanley Cain, testified before a Senate hearing as follows: "We will find answers through research on repellents, fences and scare devices."¹³ Then again in 1973, Assistant Secretary of Interior, Nathaniel Reed, testified, "A strong research effort will produce techniques that are both better and cheaper."¹⁴ Is there any wonder we are dubious about the non-lethal research. We have seen little yet of a positive nature. We thought perhaps we had not been informed of the developments of this thirteen years of research. In January we requested from the Fish and Wildlife Service a list of "appropriate livestock husbandry techniques" as was mentioned in the Andrus proposal in November. A Mr. John Rogers wrote back two months later, "we cannot provide a list as requested in your letter."¹⁵

We conclude that despite a long term and extensive research effort, very little success has been demonstrated in the non-lethal area. This does not mean we oppose further research in this area, rather as I stated earlier, we support it. But it does demonstrate the need for continuing use of existing lethal techniques as addressed in H.R. 6725 until the non-lethal area is developed, tested, and proven to be practical.

Expert testimony at this hearing will support environmental and functional aspects of the lethal techniques. We believe that this data will stand up under intense scrutiny. We suggest that the language in H.R. 6725 be broadened to include the use of lethal control methods on public lands. Executive Order 11643, issued by President Nixon in 1972 banned the use of toxicants on federal lands or in federal programs. Subsequently E.P.A. under the Federal Insecticide, Fungicide and Rodenticide Act canceled the use of toxicants as a predacide by anybody, anywhere. In light of recent data concerning Compound 1080, we believe that

these restrictions on public and private lands are arbitrary and unnecessary. We suggest Section (1), sub-section 4 include the language "on public and private lands."

In a recent letter to our Association, Interior dismisses the use of Compound 1080 because it was "controversial".¹⁶ We don't believe that controversy is a proper measure of the chemical's effectiveness or safety. Moreover, we believe it is the professional responsibility of Interior officials to provide the public factual data on the toxicant in order that an objective analysis on the use of this compound can be made.

We are further concerned that Interior, in this same letter, state that they fear "costly litigation" if they continue their research on 1080.¹⁷ We'd like them to document their rationale. We feel the results will withstand a legal test, if such is actually forthcoming. Interior is hiding behind the shroud of influence of persons who have little understanding of the scope of the predator problem, and who exhibit a capricious attitude toward the food and fiber base of this country.

Both the Executive Order and the E.P.A. law contained provisions for "emergency use." Criteria for emergency use called for an annual loss of 12 percent or more. One-third of the reporting 32 states had losses exceeding this figure in the years 1972 through 1978.¹⁸ The states of Texas, Wyoming, Montana and others have filed for emergency use on more than one occasion. The bulkiness of the procedure is demonstrated by the necessary approval of these emergency requests by the Secretaries of Interior, Agriculture, Health, Education and Welfare and the Environmental Protection Agency. If ever a bureaucratic nightmare existed, this is a classic. Despite these filings, not one emergency request for predator control was ever approved under the Executive Order, although two sliced handily through the red tape to protect the whooping crane and the aleutian geese!

It is these types of frustrating inequities that fire the enthusiasm of the so-called Sagebrush Rebellion, or preferably, the Sagebrush Bill of Rights. Westerners would prefer to take their requests to state governments rather than face a continuous senseless ~~inaction~~ by federal agencies.

All in all, Mr. Chairman, we believe that Interior simply and unequivocally does not intend to control predators or carry out a program as mandated by the 1931 Act.¹⁹ Likewise, we believe that H.R. 6725 would reaffirm and re-establish a commitment in support of a viable predatory animal control program. It also would interject the production orientation of the U.S. Department of Agriculture, a much needed input.

As I mentioned earlier in my statement, the sheep industry is in a positive position to continue its growth and expansion. The National Wool Growers Association is dedicated to that end.

We don't relish being characterized as environmental despoilers, and we are convinced that the testimony you will hear today, or already have heard will demonstrate that we are not. We are concerned about our livelihood. We are concerned that on one hand millions of dollars have been spent on productive research to increase birth rates of sheep, to increase lamb weights and to provide a higher quality wool clip; and on the other hand, the benefit of this research is being wasted through the destruction of the product. We are concerned because of the tense international situation. At the outbreak of the second World War, and again in Korea, the United States found themselves short of wool and were forced to compete on the world market for needed quantities to clothe and equip our armed forces. In 1954, Congress declared wool an essential and strategic commodity.²⁰ With growing mid-eastern tensions, we submit that the wool industry should be stimulated and encouraged to expand the domestic supply in the interest of national defense. We are not here to plead poverty or persecution. We are concerned because the present bias of the Animal Damage Control Program will do irreparable damage to our industry, and to our nation.

Human health is at issue as it relates to disease transmitted by increasing unmanaged predator populations. Energy conservation is at issue. Inflation is at issue caused by a decreasing product base. The issue is much larger than just whether we sheepmen can expect reasonable support to protect our sheep as stipulated in laws of our country.

Will we be allowed to protect our private property from a public entity? The issue is complex. Our concerns are sincere--our disappointments are justified. We urge the passage of H.R. 6725.

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13. Transcript of Hearing before the House Committee on Merchant Marine & Fisheries, Sub-committee of Fisheries, Wildlife Conservation & the Environment.
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14. Transcript of Hearing before the House Committee on Merchant Marine & Fisheries, Sub-committee of Fisheries, Wildlife Conservation & the Environment.
1973.
15. Letter to Marvin Cronberg, President, National Wool Growers Association. March 6, 1980.
Signed by John P. Rogers, Acting Associate Director, Fish & Wildlife Service, U.S. Department of Interior.
16. Letter to Marvin Cronberg, President, National Wool Growers Association, March 20, 1980.
Signed by Robert Herbst, Assistant Secretary for Fish and Wildlife and Parks, U.S. Department of Interior.
17. Letter to Marvin Cronberg, President, National Wool Growers Association, March 20, 1980.
Signed by Robert Herbst, Assistant Secretary for Fish and Wildlife and Parks, U.S. Department of Interior.
18. Terrill, Clair E.
1980. "Predator Losses in 32 Individual States Showing Significant Losses to Predators Since 1958". Report to Third Symposium on Test Methods for Vertebrate Pest Control and Management Materials by American Society for Testing Materials, March 7, 1980.
19. Agriculture, Key 2, 9; C.J.S. Agriculture 6, 30 et seq., Chapter 17, § 426.
20. The National Wool Act of 1954, Title VII of the Agricultural Act of 1954 (as extended) Public Law 690, Page 17.
The National Wool Grower, November 1954.

Mr. WAMPLER. Mr. Noh, I want to thank you for your very comprehensive statement. I think the National Wool Growers has long been recognized as, not only a prestigious organization, but one that by and large does speak for the entire industry throughout our country.

On page six of your prepared statement, you said "interior." I am sure you are referring to the Department of the Interior. You said it is "hiding behind the shroud of influence of persons who have little understanding of the scope of the predator problem and who exhibit a capricious attitude toward the food and fiber base of this country."

I believe I understand what you are saying. Would you care to elaborate on that? Maybe you did so in the summary of your statement.

Mr. NOH. Well, sir, perhaps an example is the best way to express it, without getting into personalities.

Our industry faced a situation, when the Andrus new policy was presented, wherein the special assistant to Secretary Andrus was, in writing, listed as being in charge of handling all of the flow of paper work and implementing the decision, in effect. I first met her way back in 1972 at one of these hearings. At that time she was a paid staff person for one of the environmental organizations which is very much opposed to the sheep industry on this question.

We do not argue with objective, factually oriented people in these situations, but talk about putting the fox in charge of the chicken coop. That is exactly the situation that we have.

We would expect under those conditions that under a new administration the secretary of the National Wool Growers Association would be put in charge of the animal damage control program. That would not be right either.

Everywhere we turn we find these sorts of people, who do not have practical experience, but by philosophical bent are opposed to controlling the wildlife resource and consequently the result is the destruction of the agricultural resource.

That is what I was referring to and that sort of thing. That is just one example of many.

Mr. WAMPLER. I certainly would not want you to get involved in personalities. That was not the purpose of my question, but I think you handled it in such a way that you cleared up any doubt in my mind that might have existed.

Let me ask you a final question. Are you convinced, on the basis of your experience and observation, that the losses to the sheep and goat industry from predators is well documented? Is it factual? Is it accurate?

Mr. NOH. At this point it is as accurate as we can get. It is not an easy thing to measure simply because of the vast distances involved, the complexities you run into when you deal with living things.

The U.S. Department of Agriculture has done some good studies. Dr. Clair Terrill presented a paper, which is referred to in our statement, in March of 1980. He is a good scientist. I have not had a chance to dig into his paper to really give it an evaluation, but I know he is a good scientist that does good work.

In my mind, yes. When we started on this problem in 1972 or 1973 the public generally did not believe coyotes killed sheep. In that regard, I guess we have come a long way, although some organizations are still trying to raise money and are convincing their constituents

that coyotes do not kill sheep. However, we know they do and I think we have a pretty fair handle on the severity of the problem.

Your scientific witnesses tomorrow can speak to that, I think, perhaps better than I can.

Mr. WAMPLER. Thank you again for your statement.

Mr. DE LA GARZA. You mentioned the fact that your organization supported or would support transfer of the animal damage control program to USDA. Is that correct?

Mr. NOH. Yes, sir. That is correct. We would. We have not felt that way before.

Mr. DE LA GARZA. I have been informed that USDA would not be adverse to accepting that responsibility. After we get through with this legislation it may be something that we would want to look into, Mr. Wampler.

Hopefully, we will proceed and have a meeting of the minds on this legislation to try to help the industry and then we will come back and see about doing something about a transfer.

We thank you very much for your testimony here, sir.

We have one more witness. However, the House is in session and we have a recorded vote.

Mr. Gillmor, if you will bear with us, Mr. Wampler and I will go and record our presence and will come right back and finish. With that, we will stand in recess for a few minutes.

[Recess taken.]

Mr. DE LA GARZA. The subcommittee will be in order.

The next witness is Mr. Stephen Gillmor of the Utah-Idaho Farmers Union. I see you will be accompanied by Mr. Bob Mullins. We are happy to have you here, sir. We will be happy to hear from you at this time.

STATEMENT OF ROBERT J. MULLINS, ASSISTANT DIRECTOR, LEGISLATIVE SERVICES, NATIONAL FARMERS UNION

Mr. MULLINS. Thank you, Mr. Chairman.

I am Robert Mullins, the assistant director of legislative services for the National Farmers Union.

I would just like to have my statement entered into the record in full and allow Mr. Stephen Gillmor, a member of the National Farmers Union from Utah, who also serves as treasurer of the National Wool Growers Association and is a sheep farmer from Utah, to present our position to the committee.

Mr. DE LA GARZA. Without objection, your statement will appear in the record at this point, Mr. Mullins.

[The prepared statement of Mr. Mullins follows:]

STATEMENT OF ROBERT J. MULLINS, ASSISTANT DIRECTOR, LEGISLATIVE SERVICES, NATIONAL FARMERS UNION

Mr. Chairman and Members of the Subcommittee: I am Robert J. Mullins, Assistant Director of Legislative Services, National Farmers Union, 1012 Fourteenth Street, N.W., Washington, D.C. National Farmers Union is a general farm organization representing some 300,000 farm and ranch families. On behalf of the livestock producer-members of the Farmers Union, and particularly our sheep producers, I appear before this Subcommittee in support of H.R. 6725, the "Animal Damage Control Act of 1980," introduced by the distinguished Chairman and Mr. Loeffler of Texas.

Conservative estimates place the annual financial loss suffered by livestock producers due to predators at over \$50 million. Losses to sheep producers from all predators amount to 55 percent of their total lamb losses and 31 percent of adult sheep losses. Eleven percent of calf losses in the United States is attributable to predators with almost 14 percent of the calf losses in the Western states caused by predators. The losses sustained by livestock producers from predators cause significant economic damage.

Recognizing the severity of the problem, and the inadequate and often counter-productive federal predator control policies, the delegates to the recent National Farmers Union convention held in Denver, Colorado, March 2-6, 1980, adopted the following statement on Predator Control:

Since the 1931 Animal Damage Control Act mandates that the federal government shall protect the livestock industry from predatory loss, we urge that the Secretary of Interior reevaluate his recommendations concerning the Animal Damage Control (ADC) program. The proposed rules limit control measures available to our livestock producers and are in direct conflict with the original intent of the law. The Secretary's recommendations would, in effect, withdraw the support of the Interior Department's resources in predator control and further bind the hands of livestock producers in their control efforts.

We recommend that the original intent of the law be carried out and that the ADC program be adequately funded and staffed to effectively deal with the predator problem. Stockmen are under severe financial stress because of the limiting regulations issued by the Interior Department.

The coyote population is up over 300 percent in recent years and is creating problems to the human population. The judicious use of 1080 and M-44 cyanide guns, the use of aerial shooting in winter, trapping, and other control practices must be continued on federal, state, and private lands to control coyotes, trophy game animals, and other predators if this country is to protect its livestock industry and guarantee Americans abundant food and fiber.

We call on sportsmen to join with the livestock industry to conduct a concerted campaign to force the United States Department of Interior and the EPA to act to restore the use of 1080 and keep other methods available for predator control. This action will benefit both the sportsman and the livestock industry. If an adequate ADC program is not available to farmers, we recommend that a federally financed indemnity program be instituted to pay for livestock losses. We further recognize that the Interior Department has the responsibility to control the timber wolf or compensate livestock producers where the timber wolf is the predator.

Failure of the Interior Department to commit itself to the basic goals of the ADC program requires that Farmers Union request the transfer of this vital program to another agency which will carry out the intent of the law.

Mr. Chairman, if we are to have a viable livestock industry, particularly a sheep industry in this country, we must provide producers an opportunity to produce their commodity in the most efficient manner and this includes a reasonable and practical approach to predator control. We believe the legislation before the Subcommittee today will reinstate the intent of Congress when they passed the original Animal Damage Control Act and provide producers an opportunity to overcome one of their most pressing and costly problems.

Thank you.

STATEMENT OF STEPHEN T. GILLMOR, UTAH-IDAHO FARMERS UNION

Mr. GILLMOR. Mr. Chairman, I am pleased to be here. I am Stephen Gillmor. I am treasurer of the National Wool Growers Association, past president of the Utah Wool Growers. My statement will be made on behalf of the National Farmers Union from Utah.

I have a range operation in Utah. I guess we are the leading migratory sheep State in the Union. Our ranges run from the far west of Salt Lake to east of Salt Lake. It is very diversified rugged country.

I would like to highlight portions of my written statement and present it in that manner.

Mr. DE LA GARZA. Very well, sir. Your full statement will appear in the record, without objection.

Mr. GILLMOR. Thank you.

The National Farmers Union supports your bill, H.R. 6725, and we congratulate you on its contents because it parallels National Farmers Union policy, calling for an effective damage control program with adequate funding and staffing to carry out the original intent of the law.

The economic situation which exists in agriculture today presents a fine line between a profit and a loss. In Utah we have had so many operators go out of business that it seems to be more loss than it is profit.

We, in the livestock industry, face about the same 20-percent inflation rate that each American faces. We are confronted with the same spiraling energy costs, and when we go to lending institutions for operating capital, we too are confronted with high interest rates.

As of March 15 the farm parity ratio has declined to just 63 percent with wool prices at 50 percent of parity, lamb prices at 74 percent, and cattle prices at 81 percent.

Secretary Andrus, in his policy, has emphasized that preventative control should only be exercised for unacceptably high levels of loss which have been documented during the preceding 12 months. It seems to us that any loss should be deemed unacceptable if it is within our power to prevent.

Recent USDA studies have reported a predator loss to Utah sheep and lamb producers in an excess of 16 percent in 1978, 18 percent in 1979, and greater losses predicted for this year. I can attest to the accuracy of their figures.

We live in a period of increasing costs of living. I cannot think that any American would want to take 18 percent right off the top and call it an acceptable loss from his income.

The Secretary proposes forming working groups and advisory committees with very limited industry representation, totally neglecting representation from the States affected by predator problems. This type of disrespect for the ability of industry and regional representation by our Government officials fuels the fires of incidents like the "Sage Brush Rebellion" and the American Agriculture Movement.

I would like to point out that stockmen are environmentalists in the purest sense of the word. We must rely on the ability of the rangelands to produce forage for our stock each year.

It must be recognized that the rangelands of the West are a renewable resource which cannot be used effectively without domestic livestock. In our own situation in the rugged mountains I cannot pull sheep camps, so I have to use mules to pack. There is a fine crop of grouse and grass and weeds and forage that grow in this country and there is only one way to harvest that crop. That is with sheep.

In some areas similar to it, I suppose sheep and goats would be appreciated.

Some wildlife biologists have found that coyotes and other predators adversely affect the reproduction of large game animals, like the deer. An effective predator control program will lessen the predation problem on our wildlife population.

We, in Utah, had a program with our hunting people. We tried to ally them with us. We did manage to get over a great understanding of predation on the deer population. We aroused them by coming out with a bumper sticker: "Did the coyotes kill your deer?"

In 1977, when President Carter gave his environmental message to Congress, a much more imposing problem surfaced, the energy crisis. With this effort, Americans will be using less synthetic fiber, hopefully, and returning more to the natural fibers, wool, and cotton.

We need to look to the renewable resources of a rangeland to produce both food and fiber at a minimal expenditure of energy.

Farmers Union recommends the judicious use of 1080, the M-44 cyanide gun, the use of aerial gunning in the winter, trapping, denning, and other control practices on Federal, State, and private land to guarantee a viable livestock industry producing an abundance of food and fiber.

Use of the 1080 toxic collar appears to fulfill the criteria set forth in the Secretary's policy. It is selective to the point that it removes the offending predator.

The ADC program as mandated in 1931 is not a program of extermination of predators but is one of control. Neither the Farmers Union nor stockmen want to eliminate total populations of predatory animals. However, a control program is necessary.

A report by the Utah Department of Agriculture shows that the ADC program is conducted on only 11 percent of the Western State's land area, with aerial hunting and denning practices used on only a small proportion of that 11 percent.

In Utah spring lambing coincides with coyote whelping. The pups are not the actual predator but they are indirectly the cause of apparent predation on the lambing operation. I left the desert day before yesterday and in rounding up we found five ewes—we start lambing in May—in a very small area, each of whom was opened up by coyotes and the unborn lambs were taken from the womb.

Aerial hunting, especially in the wintertime, with snow cover is another control measure which can be directed at regions of high predation and will generally register immediate results. In our area we use it as a preventive program on our summer and spring ranges. When the snow is on the high mountain country we fly in and do this type of work and it is most effective.

In winter we fly over snow cover and have great effect on the the coyotes near and around the herd.

In the absence of an effective predator program in the State of Utah, it is questionable whether or not sheep producers will be able to withstand the economic losses from predation.

Bob Reynolds, who heads up our fish and wildlife animal damage control in Utah, when Andrus' report came out, said, "Well, I give the industry another 3 years."

The Secretary's policy regarding livestock husbandry techniques to reduce conflicts between livestock and predators seems to be out of place. In recent years our predator losses have dictated that herders keep the stock closer together for protection, but best range management is to spread out the herd so the range is not overgrazed and damaged.

It is quite a dilemma when Forest Service and BLM directs us not to bed our herds more than two nights in any one spot and yet the Secretary comes out and tells us that we are going to have to have tight herding practices in order to reduce coyote predation.

National Farmers Union policy calls for an animal damage control program with adequate funding and staffing to provide the necessary protection to livestock producers. If an ADC program of this caliber is not available, then a federally financed indemnity program should be instituted to pay for the livestock lost.

The Secretary's policy statement is a clear failure by the Department of the Interior to commit itself to the original intent of the law and is considered unacceptable for the continuation of a viable livestock industry.

In conclusion, I would like to say that we, in the sheep business, have produced optimum yields of meat and wool when we had a full spectrum of working tools to handle this situation. When we had all the methods of predator control at our disposal, we were raising large percentages of lambs with much less cost.

We were able to produce these things without asking for subsidies, without asking for handouts from anyone. We were able to make a good business out of the sheep industry. At this point, it is impossible.

Coyotes are not an endangered species. When our heavy control program was taken out of effect the coyote population flourished and is now 300 percent of the level at that time.

I think that if we can be given a suitable predator control program, we will produce great yields of food and fiber for our Nation and the world in these critical times.

I thank you for being able to make this presentation.

Mr. DE LA GARZA. Thank you, sir.

Mr. Wampler?

Mr. WAMPLER. Mr. Gillmor, I just want to compliment you on your very comprehensive statement. I think you emphasize some of the points to which earlier witnesses have testified.

I will ask you the same question that I have asked several of the other witnesses. That is, do you feel that the losses to the livestock industry that result from predators is well and accurately documented?

Mr. GILLMOR. I do, Mr. Wampler.

It is a difficult thing, with ranges such as I have that are very brushy and rugged. You learn by experience what percentage of loss might occur.

If you are on an open plain it would be possible to some extent to count most of the deaths, but in the rough brushy areas such as we are in you have to rely on what you have seen in the past and on your computation of the counts on and the counts off, never being able to recover the stray loss. In view of that, I think they are well documented.

Mr. WAMPLER. In any event, it would be fair to say that the loss is substantial and significant. Is that not so?

Mr. GILLMOR. Yes, In Utah in 1972 we had 1.2 million sheep. At the present time we have about 565,000 ewes, so you can see what has happened in 8 short years to the Utah sheep population.

Mr. WAMPLER. I will also ask you the question that I have asked other witnesses. One of the recommendations of Mr. Andrus was that we go back to having herdsmen to go with the flocks. Would this be practical in your area of Utah and the other areas that you represent today?

Mr. GILLMOR. In my own particular operation I do use herders. I use herders all the time except in the shed lambing part of my operation. Those men work in the shed. We have used all of the practices.

I grew up in a situation where there were predators. When we came to bedding grounds, we tried everything. We have tried extra bells. We have tried bedding sheep with radios playing on peaks. Some of the things work for a short time.

We have tried firecrackers. The coyote is a most intelligent animal. Once they see your pattern and know what it is, and they get used to it, it does not matter what you do. They will come in and make a kill.

Mr. WAMPLER. You also indicated that it was your opinion that the coyote is not a potential candidate for the endangered species list. You might have heard the response of one of the witnesses from the Environmental Protection Agency this morning when he replied to a question. He said that perhaps the coyote will be a candidate for their list of pests.

I quite agree with you. I can distinguish in my own mind between predators like the eagle that is on the endangered species list and the coyote but, again, the question is: How do you weigh legitimate environmental concerns against those of sound economics and practicality? That is what this subcommittee is attempting to do, of that I want to assure you.

Thank you very much.

Mr. GILLMOR. Thank you, Mr. Wampler.

Mr. Chairman, may I submit a statement from Dr. Creer, our secretary of agriculture in Utah? He asked me if I could deliver it to this committee.

Mr. DE LA GARZA. Yes, sir. Without objection, your entire statement and the statement of Mr. Creer will be made part of the record at this point.

[The statement of Stephen T. Gillmor and Kenneth B. Creer follow:]

STATEMENT OF
STEPHEN T. GILLMOR
UTAH-IDAHo FARMERS UNION

I am Stephen T. Gillmor, a member of the National Farmers Union from Utah, treasurer of the National Wool Growers Association, past president of the Utah Wool Growers and a sheep producer. I appreciate the opportunity to offer this statement concerning the Animal Damage Control program on behalf of the 300,000 member farm families of the National Farmers Union.

The National Farmers Union supports H.R. 6725, introduced by Congressman de la Garza and Congressman Loeffler, because it parallels National Farmers Union policy calling for an effective Animal Damage Control program with adequate funding and staffing to carry out the original intent of the law.

It is clearly evident that the Secretary of Interior's November 8, 1979 policy announcement regarding the ADC program reflects the pressure exerted by environmental groups, failing to consider the far reaching impact it will have on the western livestock industry. This decision is in direct conflict with the original intent of the 1931 Congressional mandate which directs the Interior Department to develop and maintain an effective predator control program to protect this nation's livestock resource from predatory loss. The ADC program effectively controlled loss from predators until 1972 when President Nixon banned the use of Compound 1080—governmental removal of a workable tool.

The economic situation which exists in agriculture today presents a fine line between a profit and a loss. We in the livestock industry face the same 20 percent inflation rate that each American faces; we are confronted with the same spiraling energy costs; and when we go to lending institutions for operating capital, we too are confronted with 20 percent interest figures. As of March 15th, the farm parity ratio has declined to just 63 percent of parity with wool prices at 50 percent, lamb prices at 74 percent and cattle prices at 81 percent. At the same time government economists are predicting a 25 to 30 percent decline in gross farm income in 1980. The parity formula measures the purchasing power of farm and ranch commodities in respect to articles purchased by farmers and ranchers using the years 1910 to 1914 for a base to determine prices for both agricultural and non-agricultural commodities.

Secretary Andrus, in his policy has emphasized that preventative control should only be exercised where unacceptable high levels of

loss have been documented during the preceding 12 months. It seems that any loss should be deemed as unacceptable if it is within our means to control such loss.

Recent USDA studies have reported a predatory loss to Utah sheep and lamb producers in excess of 16 percent during 1978, 18 percent during 1979 and greater losses predicted for 1980. We live in a period of increasing costs-of-living; would other American industries or even the wage earner find it acceptable to take away 18 percent of its gross income for any reason? The Interior Department with its research budget has failed to provide any guidelines for levels of losses which are biologically or even socially "acceptable".

Stockmen are confronted by different predatory problems as we move from one region to another and from one season to the next. The Secretary proposes forming working groups and advisory committees with very limited industry representation and totally neglecting representation from the states affected by predator problems. This type of disrespect for the ability of industry and regional representation by our government officials fuel the fires of incidents like the "Sagebrush Rebellion" and the American Agriculture Movement.

At the National Farmers Union annual convention held in March, our delegates reaffirmed our commitment to the original intent of the 1931 Animal Damage Control Act and recommends that the Secretary of the Interior should re-evaluate his policy of withdrawing the Interior Department's support in effective predator control and further binding the hands of livestock producers in their own control efforts. This is particularly devastating in the Mountain West where in Utah 86 percent of the land is controlled by the Bureau of Land Management, Forest Service and State Lands. Many, of the western states find themselves in similar situations.

Stockmen are environmentalists in the purest sense of the word. We must rely on the ability of the range lands to produce forage for our stock each year. It must be recognized that the range lands of the west are a renewable resource which cannot be used efficiently without domestic livestock. Range biologists have found that "bitter brush", the primary diet for deer populations in the west, cannot compete with grass. Livestock grazing, properly managed, utilizes the renewable mountain grasses and makes room for the growth of additional wildlife forage.

Farmers Union has called on sportsmen to aid in the campaign to force the Interior Department to conduct a viable Animal Damage Control program and keep control methods available to stockmen. A

strong program is essential to both groups to have healthy wildlife and livestock herds. A report, Coyote Damage in the West: A Study of Coyote Management surveyed completed research studies of the impact of the ADC program on domestic livestock and wildlife. It showed that over half of the study's findings were that an effective program is beneficial to both livestock and wildlife populations. Some wildlife biologists have found that coyotes and other predators adversely affect the reproduction of large mammalian species including antelope white tail and mule deer and big horn sheep. A effective predator control program will lessen the predation problems on our wildlife populations.

In southwest Utah, in an area called the Beaver Dam Slope, biologists are studying the desert tortoise, a species under investigation for endangered classification. Preliminary findings are that mammal, reptile and bird predators are having an adverse impact on the survival of the desert tortoise. It seems that any plan to protect this species will have to include an effective predator control program.

Since 1977, when President Carter made his Environmental Message to Congress, a much more imposing problem has surfaced, the energy crisis. Our President has begun a concentrated conservation program to decrease our nation's dependence on imported oil. We have all been asked to comply with temperature constraints in our homes and offices and energy constraints in our business activities. With this effort, Americans will be using less synthetic fiber from oil and will be returning to natural fibers such as wool, to keep them warm. Since 1974, the year of the first oil shortage, the consumption of wool is up by 60 percent. Energy conservation is a paramount issue and gasoline prices are pushing \$1.50. We need to look to the renewable resources of our range lands to produce both food and fiber at a minimal expenditure of energy.

Farmers Union delegates recognized the severe financial stress that livestock producers are under and argue that the announced policy will add further financial burden on the agricultural sector. Since the ban of 1080 the coyote population has been increasing, causing additional livestock loss and creating human health problems through disease they carry such as rabies. Our policy opposed the initial ban and the Secretary's prohibition of further research and development of potential use for 1080. Farmers Union recommends the judicious use of 1080 and M-44 cyanide guns, the use of aerial gunning in winter, trapping, denning and other control practices of federal, state and private land to guarantee a viable livestock industry producing an abundance of food and fiber.

The prohibition of research and development of the use of compound 1080 seems to possess purely political motives since research in recent years has developed methods of use which can be safe and selective without known secondary effects while providing an efficient control method to reduce livestock loss. Use of the 1080 toxic collar appears to fulfill the criteria set forth in the Secretary's policy. It is selective to the point it removes only the offending predator.

The ADC program as mandated in 1931, is not a program of extermination of predators but is one of control. Neither the Farmers Union nor stockmen want to eliminate total populations of predatory animals however, a control program is necessary. A report by the Utah Department of Agriculture shows that the ADC program is conducted on only 11 percent of the western states land area, with aerial hunting and denning practices used on a small portion of that 11 percent. In Utah spring lambing coincides with coyote whelping. The pups are not the actual predator but they indirectly are the cause of the parent predation on lambing operations. At the same time, the parent coyotes are training the next generation of sheep predators. The tool of denning is an economically efficient and selective practice aimed at the offending coyote and is often the only method which can stop killing when adults cannot be removed. Aerial hunting is another control measure which can be directed at regions of high predation and generally will register immediate results. Without the use of these practices, we will have to turn more to the use of traps and M-44 cyanide guns not as humane nor nearly as selective. ^{With} The absence of an effective predator program in the state of Utah, it is questionable whether or not livestock producers will be able to withstand the economic loss from predation.

The Secretary's policy regarding livestock husbandry techniques to reduce conflicts between livestock and predators seems to be out of place. It is not one of the responsibilities of this program, however, many of the recommendations are ineffective in the Mountain States for range operators. We have always used herding on open ranges to keep our stock within the allotments and moving to new grazing. In recent years, our predatory losses have dictated that herders keep the stock closer together for protection, but best range management is to spread out the herd so the range is not over grazed and damaged. The alternative of fencing is not feasible in a state where government controls 86 percent of the land area. The land areas requiring fencing are too large to make it an economical investment and it would not alter the predator problem.

The ADC policy announcement by Secretary Andrus is indicative of the frustration that livestock producers are confronted with from Washington, D.C. in recent years. His announcement was reported as compromises between both stockmen and environmentalists. The compromises none-the-less, seem to drastically favor the environmentalists' position without social or biological reason.

National Farmers Union policy calls for an Animal Damage Control program with adequate funding and staffing to provide the necessary protection to livestock producers. If an ADC program of this caliber is not available, then a federally financed indemnity program should be instituted to pay for livestock loss. With the increasing demand for red meat and wool, an indemnity program allowing loss of both is contrary to the need of producing food and fiber for human use. Farmers Union policy further recommends that where a protected species is causing the predation problems, such as the timber wolf, stockmen should be compensated.

The Secretary's policy statement is a clear failure by the Interior Department to commit itself to the original intent of the law and is considered unacceptable for the continuation of a viable livestock industry. The National Farmers Union is seeking to reinstate an acceptable predator control program to achieve this basic goal.

We in the sheep industry have produced optimum yields of meat and wool, when we had a full spectrum of "working tools" to effectively control predation. As these tools have been removed, beginning in 1972, our sheep losses have been tremendous. Our sheep numbers have been continually declining, until 1979 when the trend was reversed and reported a 2 percent increase.

Coyotes are not an endangered species. History has proven their adaptability and ability to survive. Give us a suitable predator control program and we will produce great yields of food and fiber for our nation and the world.

Thank You.

**PREPARED STATEMENT OF DR. KENNETH B. CREER, COMMISSIONER, UTAH STATE
DEPARTMENT OF AGRICULTURE**

Mr. Chairman and Committee Members: The Utah Department of Agriculture applauds your concern with Animal Damage Control. We support HR 6725 introduced by Congressmen de la Garza and Loeffler.

We are concerned with Secretary Andrus and the Department of Interior policy on the ADC Program issued November 8, 1979, which completely ignores testimony from an industry that supports a strong tax base and is a vital part to the economic structure of the Western United States.

The evidence is strongly evident that the Secretary yielded to the political pressure exerted by CEQ with complete disregard for the ADC Program mandated by law in 1931 and testimony presented by the livestock industry at hearings in the regional EIS hearings.

Predator damage in the Western United States causes serious economic losses to the rural areas of the West. The renewable resources of grazing public lands should receive appropriate priority in the multiple use concept. In many instances the Secretary's policy lacks objectivity and is not based on established fact or competent professional appraisal.

The Policy bans "denning" as a barbaric tool of ADC Program; when in reality, it is an inexpensive method of control. Those opposed to this tool on humane ethics should view mutilated lambs and their distraught mothers after coyote attacks.

The Policy requires extensive documentation of losses before corrective control may be initiated. It eliminates the use of proven methods in favor of unproven non-lethal method focused on the individual offending predator.

At a time when research with the toxic collar and compound 1080 is proven effective on offending predators, all research on this highly selective toxicant is to cease. The livestock industry was implicitly given assurances that development research, on the toxic collar would lead to registration if certain criteria were met. Now on the threshold of practical application after many years of research it is prohibited by the USDI.

Traditionally the ADC Program has been a cooperative effort with federal, state, and private land management personnel. We are concerned that the USDI Policy Statement will terminate cooperative programs in favor of individual private control efforts, which will result in the indiscriminate use of methods which are not controllable; therefore, defeating the very purpose of the Policy.

We recommend the Policy be abandoned in favor of an objective program of predator control and not extinction, a program compatible with all facets of concern. This will require a balanced committee of professional, knowledgeable members.

The ADC Program is vital to our Western Citizens and urge the need for continued research and use of proved control methods. We also support passage of HR 6725.

Thank you.

Mr. DE LA GARZA. We thank you both for being here and for your testimony which I think will be quite helpful to us.

The committee will stand adjourned until 10 tomorrow morning.

[Whereupon, at 3:35 p.m., the subcommittee stood in recess until Thursday, April 17, 1980.]

ANIMAL DAMAGE CONTROL ACT OF 1980

THURSDAY, APRIL 17, 1980

**HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON DEPARTMENT
INVESTIGATIONS, OVERSIGHT, AND RESEARCH
OF THE COMMITTEE ON AGRICULTURE,
*Washington, D.C.***

The subcommittee met, pursuant to recess, at 10:10 a.m., in room 1302, Longworth House Office Building, Hon. E de la Garza (chairman of the subcommittee) presiding.

Present: Representatives Skelton and Wampler.

Staff present: Fowler C. West, staff director; John Hogan, counsel; Peggy Pecore, clerk; Bernard Brenner, Bert Pena, Mario Castillo, Jerry Jorgensen, and Thomas Adams.

Mr. DE LA GARZA. The subcommittee will be in order.

This morning we continue consideration of H.R. 6725.

The first witness this morning is the Honorable Gus Douglass, commissioner of the West Virginia Department of Agriculture. Is Commissioner Douglass here?

He does not seem to be so, without objection, we will receive the testimony of the commissioner if he appears. Otherwise, we will receive it for submission into the record.

John Grandy from the Defenders of Wildlife of Washington, D.C.?

I see that you will be accompanied by Mr. Dick Randall. We welcome you and will be happy to hear your testimony at this time.

(139)

STATEMENT OF JOHN W. GRANDY, EXECUTIVE VICE PRESIDENT, DEFENDERS OF WILDLIFE;
ACCOMPANIED BY RICHARD L. RANDALL, NORTH CENTRAL FIELD REPRESENTATIVE
OF DEFENDERS, ROCK SPRINGS, WYO.

Mr. Chairman, Committee members. My name is John W. Grandy; I am Executive Vice President of Defenders of Wildlife, a major national wildlife conservation organization. I am accompanied today by Mr. Richard L. Randall, North Central Field Representative of Defenders, based in Rock Springs, Wyoming. I appreciate the opportunity to testify today on H.R. 6733 and H.R. 6725, bills that would drastically alter the predator control program which Secretary of the Interior, Cecil D. Andrus, approved on November 8, 1979.

I have a B.S. (1966) in Forestry and Wildlife Management from Virginia Polytechnic Institute and State University, and a M.S. (1968) in Wildlife Biology and a Ph.D. (1972) in Wildlife Ecology, both from the University of Massachusetts in Amherst. I have an extensive educational and professional background of study and interest in the principles governing the workings of ecological systems. I have worked, among others, for the Virginia Commission on Game and Inland Fisheries, the U.S. Forest Service, and the U.S. Fish and Wildlife Service; immediately before assuming my present position, I was chief assistant to the Senior Scientist at the President's Council on Environmental Quality. In addition, I was appointed to, and served as a member of, the recently concluded Animal Damage Control Policy Advisory Committee to the Secretary of the Interior.

Mr. Randall has worked in Wyoming and Montana as a sheep-herder and cowpuncher. He was employed by the U.S. Fish and Wildlife Service as a predator control agent from 1957-62 and again from 1967-73. His job titles and duties included: Government trapper; district field assistant; principal district field assistant; and, twice, acting supervisor for predator control activities over five southwest Wyoming counties.

Mr. Randall and I prepared this statement based on our collective experiences and expertise. We are presenting this statement on behalf of Defenders of Wildlife, Environmental Defense Fund, International Fund for Animal Welfare, Friends of Wildlife, Sierra Club, Fund for Animals, Natural Resources Defense Council, Center for Action on Endangered Species, National Parks and Conservation Association, Animal Protection Institute, Friends of the Earth, The Wilderness Society, Rare Animal Relief Effort, and World Wildlife Fund.

We judge from the language of the bill and the remarks of the Chairman that the intent of H.R. 6725 (and, similarly, H.R. 6733) is to aid the livestock industry. The intent of these bills is commendable; indeed, Defenders strongly supports the existence of a healthy western livestock industry which is responsive to the needs of this nation for food as well as for the proper management of and necessary protection for, respectively, public (and private) rangelands and this nation's wildlife heritage. To the extent that these bills are aimed at aiding in achieving such a healthy industry, we commend the goals. Unfortunately, the methods by which the bills would aid the livestock industry are inadequate -- and in all likelihood counterproductive -- to attaining the goals.

However commendable the goals, the bill(s) simply will not solve either the specific problems caused by localized wild predator(s) or the overall and larger problems of the livestock industry. Moreover, the bill(s) fail to make the necessary provisions to identify and protect the public wildlife heritage on the public trust lands of this nation. In addition, it is clear that in order to provide the industry with solutions to the problems which have been associated with predators and other factors, a totally new approach is needed.

I will discuss each of these subjects independently.

I. The bill(s) will not solve either the specific problems caused by localized wild predator(s) or the overall and larger problems of the livestock industry.

- A. This bill does not address specific, localized predator problems nor does it provide acceptable means of solving these problems.

GENERALIZED, NON-SELECTIVE LETHAL CONTROLS
DO NOT WORK AND WILL NOT SOLVE PROBLEMS OF
LIVESTOCK LOSS.

The sheep industry has over the last thirty years been the recipient of massive amounts of presumed help in the form of nearly every conceivable predator killing technique. Unfortunately, this alleged help has never solved the problem of livestock loss. Some reasons for this can only be inferred; others are more concrete.

The sheep industry grew to the height of its economic strength many decades before the introduction of toxicants such as thallium sulphate and 1080 (sodium monofluoroacetate) and before fixed wing or rotor wing aircraft came into use for predator control purposes. The industry grew at a time when the wolf and cougar and even grizzly bears were still present in the ecosystems of the West. Then, predator control had not achieved anywhere the level of intensity it has today.

The industry's decline began in the 1940's and continues yet today. (Testimony, Figure I.)

Thus, historically, predators have not prevented the sheep industry from experiencing strong growth, and likewise, government-sponsored predator control programs have not reversed the economic declines.

Total numbers of sheep and goats being grazed on Forest Service Lands have shown a steady, year-by-year decline since 1940, paralleling the decline in nationwide numbers discussed by Gee. (Testimony, Table I.)

Further, "Predation losses as a percent of total grazed" remains roughly stable in the early years, falls sharply dur-

ing the first years of 1080, but then returns to its former level while 1080 was still in use. The "total grazed" figure continued its decline throughout the 1080 era and beyond. Thus, once again, the data show that predator control, including deadly poisons, has not solved the industry's real problems.

Other reasons why livestock loss problems are not solvable using traditional approaches such as those endorsed in these bills are the way in which losses occur and the extent of such losses.

The predator problem, where it exists, concerns mostly sheep and goats. Cattle losses to predators are relatively insignificant. A U.S. Department of Agriculture survey of 1,800 ranchers and farmers throughout the nation concluded that predators killed less than one-tenth of one percent of beef cattle, 550 pounds and over, in survey populations in 1975. The majority of these predator losses were attributed to other than coyotes and dogs.

Losses of calves (less than 500 lbs.) to predators occur at a higher rate than losses of cattle but are minor compared to losses to other causes. Reported losses to coyotes in the Western states range from 0.4 percent in the Great Plains region to 0.8 percent in the Southwest. The highest loss to all predators, 1.1 percent, also occurs in the Southwest. By comparison, calf losses to theft, disease and other causes are substantially higher, ranging from 3.6 percent in the Southwest to 9.1 percent in the Great Plains region.

In short, cattle losses are so low as to be nearly insignificant on even a westwide scale. And, given the low and spotty nature of the losses, a non-selective predator control program aimed at alleviating such losses would be singularly futile and cost-ineffective.

In addition, losses to predators are spotty and highly localized. The USDA estimated (Gee, et al., 1977) that 45 percent of Western sheep ranchers suffer no ewe or lamb loss and 67 percent of Western ranchers suffer no ewe loss. Further,

most ranchers that do suffer loss suffer relatively minor loss. Therefore, the predator problem does not lend itself to solutions that attack an "average problem" or to the concept of prophylactic control.

These bills neither acknowledge the localized nature of losses to predators nor do they provide any means or guidance with which to deal with such local problems, short of "balance between lethal and non-lethal controls" (see page 13).

Furthermore, reported losses of livestock to predators are highly exaggerated. For example, the sites used by Fish and Wildlife to study predator control/livestock loss were not randomly selected. In fact, some of the study sites, such as the Cook Ranch (Henne, 1975) were selected or allowed to be used specifically because of high annual reported loss rates.

To compound the error, results from study sites that were anything but randomly selected were then assumed to be typical of losses westwide, even though nearly one-half of ranchers are known to suffer no losses. (See attached letters to Mr. Steven Freudenthal and Dr. Eugene Hester from John W. Grandy.)

Further, the built-in bias from mail surveys that report very high loss rates begin to unravel when follow-up, detailed ground surveys are conducted.

For instance, on page 26, "Predator Damage in the West", a nationwide mail survey estimated that losses in California were 2.7 percent of the ewes and 9.7 percent of the lambs killed by predators in 1974. A comprehensive survey by Nesse et al. (1976) in the same year in California, however, showed only 1.1 percent of the ewes and 2.7 percent of the lambs to have been killed by predators. Furthermore, the same USDA nationwide mail survey shows, in Kansas in 1974, that 3.2 percent of the lambs and 3.4 percent of the ewes were lost to coyotes. A Kansas study by Meduna (1975-76) in which losses were verified and 25 percent of ranchers were contacted, shows only 0.7 percent of the ewes and 0.9 percent of the lambs as

being lost to coyotes. On this basis, it seems highly likely that the USDA survey produced excessive, biased mortality estimates, perhaps based on the expectation that a showing of "high mortality" would bring increased federal aid.

In sum, for the sheep and goat industry, we know, based on the biases inherent in method of survey and/or calculation, that loss levels "on the average" are probably substantially below the "exaggerated" levels estimated by either the U.S. Department of Agriculture or the Fish and Wildlife Service. To the extent that these bills would provide "adequate" non-selective lethal controls to attack this exaggerated problem, major unnecessary destruction of wildlife can only result. Further, since the distribution of real losses is admittedly highly localized, such mass non-selective destruction would probably not help individual ranchers except by accident anyway. In short, the only chance that lethal controls can be effective is if they are directed at verified losses in particular areas, a concept that these bills fail to acknowledge.

A final reason why the generalized, non-selective lethal controls provided by these bills will not work is that not all coyotes eat sheep. For example, in pen experiments, Connolly et al. (1976) found that 3 of 11 coyotes reared in captivity did not kill sheep. At Logan, Utah, FWS biologists had 18 of 19 pen-raised coyotes kill sheep but found that only 38 of 54 wild-caught adult coyotes killed sheep when placed in a one-hectare pen with them. The remainder did not kill sheep even though food was withheld for several days. Further, Beason and Gober (1975) observed high levels of coyote activity in pastures where no livestock losses were reported. In one instance in Texas about 500 coyotes were trapped from the same pasture where only 13 of nearly 700 goats turned up missing.

In short, even in those areas where localized losses are reported, all coyotes may not be assumed to be livestock killers. Non-selective techniques which kill non-offending coyotes are likely to be counterproductive to livestock as well as the innocent coyote, since a livestock-eating coyote may ultimately replace the mistakenly killed animal. Again, the bills do not acknowledge the need to provide for a way to direct lethal controls at offending animals.

THE BILLS GIVE NEARLY NO ATTENTION TO
ANIMAL HUSBANDRY TECHNIQUES AND OTHER
NON-LETHAL CONTROLS THAT SHOW CONCRETE
POSITIVE RESULTS.

Such techniques include efficient herders and sometimes night herding; shed lambing; night corralling; guard dogs (see attached testimony); fencing, especially farm flocks; and taste aversives such as lithium chloride. The latter, highly promising technique is used operationally in the Canadian province of Saskatchewan, and has been used successfully in field experiments in the United States.

All of these tools are aimed at preventing losses and protecting sheep, which should be the name of the game, rather than killing coyotes.

The application of non-lethal depredation controls would allow coyote populations to reach more stable levels, persist at lower productivity with smaller litter size, have a smaller annual turnover in their population, and a larger proportion of older individuals. This would maximize the effectiveness of techniques such as taste aversion that depends on learned behavior and eliminate the costly, inefficient energy-intensive programs necessary for constant ineffective population reduction.

Unfortunately, the bills in question hardly provide for non-lethal controls except to suggest that a balance between lethal and non-lethal controls should exist, and the "balance" is never defined. -

Regardless, however, there is no need for this "balance", whatever its definition, if non-lethal controls can reduce losses to acceptable levels. Clearly, no one should want to kill the public's coyotes to stop predator losses if these losses can be stopped through other non-lethal means.

THE BILLS DO NOT PROVIDE OR EVEN ATTEMPT
TO PROVIDE PUBLICLY ACCEPTABLE FORMS OF
CONTROLLING EVEN LOCAL LIVESTOCK LOSSES.

A recent national public opinion survey conducted by Gallup for the U.S. Fish and Wildlife Service and Yale University makes clear both the overwhelming opposition of the vast majority of the public to traditional methods of predator control and the strong desire of the public to maintain viable populations of wildlife on this nation's land. Similarly, the analysis by the U.S. Fish and Wildlife Service of the comments received on draft and final A.D.C. Environmental Impact Statements evoked similar definitive conclusions.

Indeed, the only group in the FWS/Yale survey which favored or even approved of traditional predator control practices were the sheep producers and cattlemen, themselves. Based on the demonstrated and acknowledged ineffectiveness of traditional predator control, the support of the industry for "more of the same" represents more of an understandable frustration directed at "scapegoats" (see page 16) than a considered solution directed at a complex problem.

Unfortunately, the bills in question would tend to perpetuate the "more of the same" system rather than provide a solution which is both acceptable to the public and in fact helpful to the livestock industry.

- B. The bill(s) does not address or provide a solution to the overall problems of the (western) livestock industry.

The western livestock industry is beset by a number of

major problems. New Zealand and Australia seem capable of raising sheep and lambs, shipping lamb, wool, and mutton to the United States, and doing both in such a way as to be competitive with, if not underselling, our own U.S. industry. Indeed, if it were not for the direct or indirect subsidies provided by low public land grazing fees, incentive price supports for shorn wool, and import duties on foreign wool, among others, part of the American sheep industry might be largely out of business by now.

Regardless, however, the presence of a major competitive foreign industry provides our livestock industry with an economic problem which it cannot solve, and which the individual rancher can hardly understand.

Another major problem, which is related both to foreign competition and the demand for sheep products in this country, is that the industry is captive of a market in which it is, to a large extent, unable to effectively control price and must, therefore, accept the offered price.

Moreover, the industry is admittedly faced with a labor supply which has largely dried up. Industry began losing herders in the 1940's to the war and to employment in higher paying jobs. The problem continues today, with the children of ranchers leaving farms and the industry being unable or unwilling to provide wages which will guarantee the retention and availability of an adequate number of high-quality herders. And this lack of herders, which is a response to the real or perceived economic condition of the western sheep industry, leads directly to both predator and other losses.

For example, the livestock industry estimates that 50 percent, or slightly more, of its total losses are caused by predators. Accepting these estimates for the sake of discussion, the sheep and goat industry is still faced with 50 percent of its losses which are caused by such other factors as disease, weather, and birth-related mortality. All of

these forms of mortality, as well as predator-caused mortality, would be reduced by the presence of adequate numbers of trained herders, as demonstrated by numerous specific studies and the report on "Predator Damage in the West". Presumably, these considerations have led the federal land management agencies to conclude that the lack of herders is one of the most significant problems facing the western sheep industry.

The economic problems, coupled with a lack of adequate labor to perform proper husbandry practices, have led directly to another phenomenon: the coyote has become both a scapegoat and a visible symbol of the distress of an economically troubled industry. Consider this hypothetical, but all too real, example: a rancher, seeing a coyote eating a sheep that died giving birth, shoots the coyote. The rancher feels better, but he has not solved the problem. With better livestock husbandry, both the ewe and lamb would have survived, and the death of the coyote would not have occurred.

In short, providing more money to kill massive numbers of coyotes simply will not solve or even address the major problems of the livestock industry. Alternately, if Congress were to provide a solution to the labor problem (as we recommend at page 21, below), additional sums for lethal control would most likely be unnecessary for preventing livestock losses, as well as being contrary to the public interest.

II. The bill(s) fail to mention, consider, or provide protection for this nation's public land wildlife heritage.

To be acceptable, any bill addressing this issue must provide for maintenance of viable wildlife populations on the public lands of this nation. To do otherwise would be to treat the public lands and values of this nation like the private property of ranchers. Not only is this unacceptable to the conservation community, it is clearly contrary to administration policy. For example, the President stated in a 1977 message to Congress:

"Our Nation's public lands and waters support a rich wildlife resource which we hold in trust for all Americans, now and in the future. My Administration will assure that this public trust is adequately and effectively executed."

In addition, as positive, clear, and commendable as the President's statement was, he was in effect only summarizing existing law and statutory mandates relating to management of our public land heritage.

For example, a number of statutes directly applicable to federal lands and wildlife thereon provide a significant mandate to maintain viable natural wildlife populations on public land. Among these meaningful expressions of the intent of the Congress and the people of this nation to maintain wildlife are the following applicable laws:

Multiple-Use Sustained-Yield Act of 1960,
16 U.S.C. 528, et seq. (1970);

Protection of Bald and Golden Eagles,
16 U.S.C. 668, et seq. (1970);

Conservation Programs on Public Lands,
16 U.S.C.A. 670, et seq. (West Supp. 1976)
("Sykes Act");

Wilderness Act of 1964, 16 U.S.C. 1131,
et seq. (1970);

Federal Land Policy and Management Act of 1976,
43 U.S.C.A. 1701, et seq. (West Supp. 1976);

The Taylor Grazing Act, 43 U.S.C. 315, et seq.
(1970);

Endangered Species Act, 16 U.S.C. 1531-1543
(1978); and

Forest and Rangeland Renewable Resources
Planning Act of 1974, as amended, 16
U.S.C. 1604.

III. To solve the basic problems of the livestock industry,
a totally new approach is ne ~~d~~. This approach was
begun by Secretary Andrus's ~~mem~~ 979 decision
memo but, due to limitati ~~on~~ and budget
was not sufficiently developed

A. The Andrus Decision

The decision by the Secretary
to "predator contr*ifical*"

a decision on predator control which for the first time focused on "reducing livestock losses" rather than the more traditional "killing predators". More exactly, Secretary Andrus:

- (1) Limited the use of preventive controls, and called for the eventual phaseout of preventive controls.
- (2) Emphasized corrective control, using non-lethal, non-capture methods and focusing on offending animals.
- (3) Encouraged appropriate livestock husbandry techniques.
- (4) Expanded extension services.
- (5) Redirected and refocused research efforts.
- (6) Eliminated denning.
- (7) Limited aerial hunting and other lethal controls to areas, times, and ways which make them as selective as possible.
- (8) Eliminated use of and future research on Compound 1080.

I should point out that these decisions were not developed in a vacuum or in response to the demands of a few environmentalists. Secretary Andrus made his decision following a review and recommendations by a major advisory committee, the publication of a comprehensive report on Predator Damage in the West, and the publication of draft and final Environmental Impact Statements.

Moreover, on the Secretary's Predator Control Advisory Committee all of those members (6) not representing or supporting the livestock industry (exclusive of the non-voting Chairman) recognized that the Animal Damage Control program was not working and that a fundamental change in direction and emphasis was needed. To that end, the Advisory Committee by tie vote (6 to 6) approved the following recommendation:

"A goal of the Animal Damage Control program will be to preserve the viability of the livestock industry through reducing livestock losses to acceptable levels, ideally without the necessity of killing wildlife."

The Secretarial decision-making process took a little more than two years, and was strictly governed by both the National Environmental Policy Act and the Administrative Procedure Act. Throughout the two-year period, the vocal, traditional elements of the livestock industry continually advocated their favorite remedies for coyote predation: Compound 1080, other poisons, trapping, increased aerial gunning; in short, more non-selective killing. They advocated these through and within every possible political forum. The problem for the industry was and is, as I have tried to emphasize today, that there was no data to support the idea that increased, non-selective killing would help reduce livestock losses to predation.

And, with the notable exceptions of the Animal Damage Control personnel and vocal elements of the livestock industry, everyone seemed to recognize these facts in the data. The general public was violently opposed to continuation of the status quo. The Bureau of Land Management, the President's Council on Environmental Quality, the U.S. Department of Agriculture (through Assistant Secretary Cutler), and the Environmental Protection Agency endorsed, on the basis of the data, a program that incorporated most of the major elements which were ultimately adopted by Secretary Andrus. These same governmental agencies strongly opposed on the same basis the blind continuation of non-selective, lethal controls.

The environmental community also strongly endorsed at least the concepts which Secretary Andrus finally approved. However, we clearly wanted and continue to want a faster and more progressive solution to the problems which we have identified throughout this statement. In short, we believe that Secretary Andrus erred in not eliminating all preventive

controls at once, and sharply curtailing that variation on preventive control euphemistically referred to as "corrective control".

B. Additions which should be made to the Andrus initiative

Thus, for the reasons we have presented above:

- (1) We urge that the Congress provide, through the appropriations process, sufficient earmarked funds to allow recruitment and training of sheepherders.
- (2) Similarly, we urge Congress to provide funds, through the appropriations process, to register and field test the non-lethal, taste aversive lithium chloride, and to implement a guard dog program.

It is our belief and confidence that if these additions are made, and the Secretary's decision with its priorities is faithfully implemented, "preventive" control and "corrective" control will die of their own useless, futile weight.

IV. Conclusion

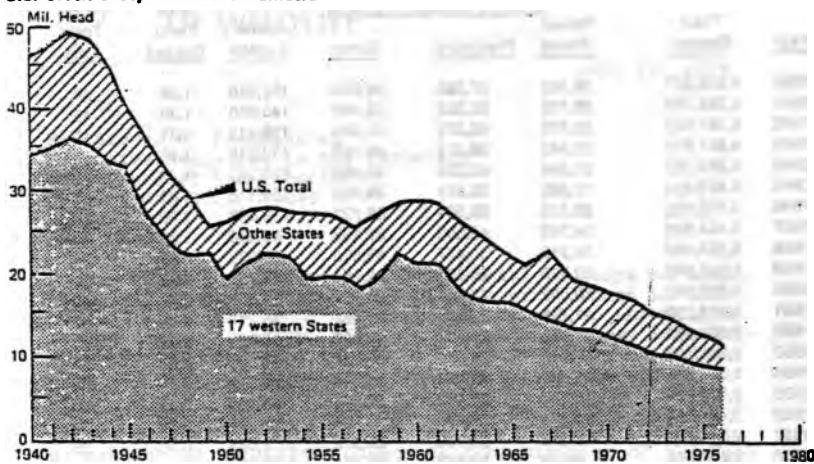
In conclusion, Defenders of Wildlife, Environmental Defense Fund, International Fund for Animal Welfare, Friends of Wildlife, Sierra Club, Fund for Animals, Natural Resources Defense Council, Center for Action on Endangered Species, National Parks and Conservation Association, Animal Protection Institute, Friends of the Earth, The Wilderness Society, Rare Animal Relief Effort, and World Wildlife Fund strongly oppose H.R. 6733 and H.R. 6725. We do this, as we have stated, not because we oppose the livestock industry. Rather, we oppose these bills because they would result in the useless destruction of America's wildlife and, would provide only a

diversion that delays rather than enhances the prospect of reducing livestock losses to acceptable levels and aiding the survival of the industry.

A shift of this program to the U.S. Department of Agriculture would be only cosmetic; USDA is governed by the same laws as the Department of the Interior, and, indeed, USDA urged a predator control policy similar to the one adopted by Secretary Andrus. Moreover, to the extent that the bills encourage increased reliance on non-selective killing of wildlife, the record shows that this provides little more than a false sense of security: twenty years of mass destruction of wildlife has apparently done almost nothing to help the industry.

I urge this Committee to strongly support Secretary Andrus's decision and provide the funding that we have requested. Secretary Andrus made a commendable and tough decision. He, as a former Western governor, decided to provide a decision for the livestock industry that gave them what they needed, instead of the counterproductive and largely superficial solutions that they advocated. I urge this Committee to carefully study the record, adopt a similar view, and provide the industry with concrete help which we have suggested and which it desperately needs.

(The "Draft Environmental Statement" is held in the subcommittee file. Other attachments follow:)

Testimony, Figure No. I.**U.S. Stock Sheep and Lamb Numbers**

Source, Gee, et al. 1977a
FIGURE 1 U.S.D.A. Report # 377

Testimony, Table No. I.

Table C-8. Sheep and Goat Losses on U.S. Forest Service Lands, 1940-1976.

Year	Total Grazed	Claimed Causes of Losses			Total Losses	Predation losses*	
		Poison Plants	Predators	Other		% of Total Grazed	% of Total Lost
1940	4,958,577	26,492	87,280	58,564	152,336	1.36	44
1941	4,792,794	25,160	85,282	53,426	143,868	1.36	45
1942	4,781,022	23,675	82,372	52,365	138,412	1.31	45
1943	4,541,876	23,345	66,474	49,197	139,016	1.46	48
1944	4,283,767	21,344	63,233	45,884	130,241	1.48	49
1945	3,892,804	17,989	65,581	39,568	123,118	1.88	53
1946	3,730,520	20,418	59,507	39,721	119,848	1.60	50
1947	3,404,596	14,743	48,092	37,165	98,000	1.35	47
1948	3,324,465	14,918	30,477	35,800	80,995	0.92	33
1949	3,095,935	12,820	28,855	32,281	73,756	0.93	36
1950	3,010,665	10,602	23,847	27,107	61,556	0.79	39
1951	3,018,218	11,725	25,224	31,265	68,214	0.84	37
1952	3,004,862	11,580	24,502	30,829	66,891	0.82	37
1953	2,987,236	11,346	24,362	30,821	66,329	0.82	37
1954	3,018,556	11,281	29,189	30,048	70,518	0.97	42
1955	2,922,031	10,787	25,462	27,906	64,155	0.87	40
1956	2,827,929	11,178	27,240	33,706	72,124	0.98	38
1957	2,709,875	9,452	21,860	25,972	57,084	0.80	38
1958	2,698,760	9,629	22,675	25,951	58,255	0.84	39
1959	2,589,614	8,881	23,108	25,973	57,962	0.89	40
1960	2,573,580	9,009	28,481	23,881	61,151	1.11	47
1961	2,490,577	9,257	25,534	25,284	60,075	1.03	43
1962	2,387,084	8,531	24,865	19,577	52,973	1.05	47
1963	2,286,265	8,104	27,616	20,256	55,978	1.21	49
1964	2,203,016	7,121	26,082	18,865	52,068	1.18	50
1965	2,099,815	7,057	26,183	20,543	53,783	1.25	49
1966	2,071,228	7,399	30,747	20,188	58,334	1.48	53
1967	1,972,759	6,907	26,785	21,791	55,483	1.38	43
1968	1,910,878	6,560	27,235	17,853	51,448	1.43	53
1969	1,865,434	5,828	34,953	21,944	62,725	1.87	58
1970	1,780,357	6,000	32,839	16,175	54,814	1.83	60
1971	1,737,172	5,318	32,075	19,386	56,779	1.85	58
1972	1,702,139	5,516	40,686	19,572	65,874	2.39	82
1973	1,515,362	6,457	31,331	19,756	57,574	2.07	54
1974	1,422,766	5,502	36,867	19,219	61,688	2.60	63
1975	1,465,492	3,922	31,785	14,049	49,737	2.17	64
1976	1,748,183	4,608	32,679	15,405	52,893	1.88	62

Source: Unpublished Forest Service data.

*The column "Total Grazed" includes counts of only adult sheep (over 6 months old) on which grazing fees are paid. Since most adult sheep grazed are ewes with lambs, and since lamb mortalities are counted as losses, the column "Predation Losses % of Total Grazed" is comprised of losses that are about twice the actual percent losses. For example, the loss of ewes and lambs to predators in 1975 is actually about 1.08 percent, and in 1976 is about 0.94 percent, not 2.17 percent and 1.85 percent as shown.

Source, page 31, Predator Damage in the West, USFWS 1978.

Defenders OF WILDLIFE

Att. 1

July 24, 1979

Mr. Steven F. Freudenthal
Executive Assistant to the Secretary
Department of the Interior
Washington, D.C. 20240

Dear Steve:

This letter represents some initial comments on some seriously inaccurate and misleading material found in the current Final Environmental Impact Statement on the Animal Damage Control Program. It is our view that these inaccuracies are of such significance as to require that an errata sheet be promptly issued concerning the portions noted.

On November 13, 1978, the Office of Audit and Investigation prepared an analysis of the operation and financial management of the Animal Damage Control Division of the Fish and Wildlife Service.

The results of that Audit were disappointing to us. In effect, the report concluded that financial controls and administration of the Animal Damage Control Program were seriously lax. Most disturbing, however, was the conclusion that up to 18 million dollars was being spent, with no indication that such expenditures are of any significant value in reducing livestock losses to predation.

In spite of these and other deficiencies in the data and program noted in your Audit Report, a Final Environmental Impact Statement on the ADC Program has now been issued which includes a table (page 141) and discussion (pages 138-142) which essentially purport to show the value of the ADC Program in terms of livestock saved, and the value thereof.

Defenders of Wildlife is quite concerned with the table and relevant discussion because (a) the presentation in the Final Environmental Impact Statement includes no mention or discussion of the Audit or the Audit findings, (b) the presentation in the FEIS seems to seriously contradict the findings contained in the Department audit of this same program, and (c) the presentation in the FEIS contains serious errors of fact and logic which are both inexcusable and misleading.

Specifically included in the latter category are the following concerns:

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1. Serious inaccuracies exist with respect to calculation of the average sheep loss rates used in Table 3-17, page 141, FEIS.

Study sites for the referenced predator control/livestock loss studies were not randomly selected. Far from it. Undoubtedly, these study sites were areas in which coyote depredation was reported since the purpose of the studies was to document coyote depredation on livestock. Indeed, some of the study sites, such as the Cook Ranch (Henne, 1975), were selected or allowed to be used specifically because of high annual reported loss rates.

That the study sites were not randomly selected is emphasized by the results of the recent U.S.D.A. study (Gee et al., 1977) where it was found that 45 percent of the western ranchers surveyed suffered no ewe or lamb loss and 67 percent of such ranchers suffered no ewe loss.

By definition, then, the studies used by the Fish and Wildlife Service, to the extent they are at all "typical", are typical only of the relatively small number of ranches where reported loss rates are substantial and significant. Clearly, these loss rates are in no way typical of loss rates for westwide livestock industry given the results of studies by Balser (1974) and Gee et al. (1977).

An earlier complaint to the Fish and Wildlife Service on this same subject involving the identical figures used in the ADC DEIS (December 1978) brought total agreement with my position (see attached). In fact, FWS Associate Director, Dr. F. E. Hester, stated in his January 30 1979 reply to me: "We appreciate your remarks the implication that they /derived loss rates/ are somehow typical of the loss situation westwide will be corrected in the final EIS." However, as evidenced in Table 3-17 these implications have not been corrected.*

*Another set of derived loss rates cited in the FEIS (p. 45) as being from FWS (1978a), which was the Report on Predator Damage Management in the West, are inaccurate for reasons identical to those stated herein in (1) above. These loss rates were formulated again using predator loss studies in ranches where high losses were regularly reported. Hence, derived loss rates and resultant calculations are only applicable to those relatively small number of ranches where high losses occur.

2. Serious errors of fact and logic were made by applying derived loss rates to the total western livestock inventory in determining "estimated loss".

The U.S.D.A. estimated (Gee et al., 1977) that 45 percent of western ranchers suffer no ewe or lamb loss and 67 percent of western ranchers suffer no ewe loss. These results essentially agree with those of Balser (1974). Similarly, the FWS estimates that the ADC operation "protects or impacts" about 66 percent of western sheep (Table 1-11, page 43, PEIS).

However, the admittedly high estimates of loss rates (discussed in (1) above) are multiplied by the total western livestock inventory to determine estimated losses with and without predator control. Obviously since the loss rates apply only to areas where losses occur, and since only about 55 percent of ranchers suffer any lamb losses and about 33 percent of ranchers suffer any ewe losses it is incorrect to multiply derived loss rates as calculated) by the total western livestock inventory to compute estimated loss.

3. Apart from the above, Table 3-17 (attached) also implies seriously misleading information. Information on page 140 essentially states that the line entitled "Possible loss without control" should, to be accurate, be titled "Maximum possible loss without control. The omission of this word is obviously important to how the table is interpreted by the reader.

Similarly, the following line, "Difference in loss, with and without control" should read "Maximum possible difference in loss, with and without (current) control". The omission of these words, again, has a tremendous impact on how one interprets Table 3-17.

These seriously misleading omissions should, in our view, be corrected immediately.

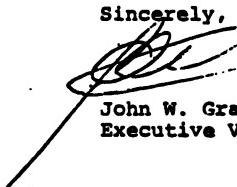
The referenced discussion of the value of the current ADC Program is obviously of critical importance to a complete understanding of this program by Secretary Andrus and the interested public.

As discussed herein, our analysis suggests that the presentation on pages 138-142 of the FEIS makes a mockery of the conclusions and evaluation contained in the Audit. Further and more seriously, for the reasons contained in the Audit and in this letter, the Secretary and the public are potentially to be presented with biased, inaccurate, and misleading information on which to base an extremely important decision.

Please understand that we do not maintain that the current Animal Damage Control Program is of no value to anyone, or that coyotes do not kill sheep. We do maintain, on the basis of the figures presented, that the value of the current program in the FEIS is seriously and demonstrably overstated and that such an overstatement could cause a major bias in the evaluation of the current program and alternative programs by both the Secretary and the public.

Accordingly, we urge you to issue an errata sheet concerning these calculations as quickly as possible, and to provide, in such an errata sheet, some discussion of the relation between this document and the Department's own audit.

Sincerely,



John W. Grandy
Executive Vice President

JWG:lr
Attachments

cc: Richard J. Myshak
Interested Parties

Defenders OF WILDLIFE

January 9, 1979

Dr. F. Eugene Hester
 Associate Director
 Environment and Research
 U.S. Fish and Wildlife Service
 Department of the Interior
 Washington, D.C. 20240

Re: Denver Wildlife Research Center's Opinion,
 Page 105 of the DEIS (#78-49) on Predator
 Control

Dear Dr. Hester:

I am addressing this letter to you as the Government official responsible for supervising the operation of the Denver Wildlife Research Center. Unfortunately, we have discovered certain inaccurate statements which threaten the credibility and objectivity of the Center.

Defenders of Wildlife is currently conducting an in-depth review of the Draft Environmental Impact Statement on the U.S. Fish and Wildlife Service's Mammalian Predator Damage Management for Livestock Protection in the Western United States. In that regard, we were particularly distressed by the Denver Center's "opinion" referenced on Page 105:

"It is the opinion of the Denver Wildlife Research Center that those studies with control are typical of losses expected in areas where control is applied; however, the percent of loss in the studies without control may be low due to external influences such as trapping and aerial hunting in and adjacent to the study areas."

This opinion presumably tends to lend credibility to derived sheep loss rates of "1.9 to 6 percent" in areas with predator control, and loss rates of "13, 36.3, and 7.6 percent" in areas without control. It is further suggested that these studies are representative of areas with "(1) ongoing predator control, and (2) without or very limited control."

The endorsement of the Denver Center of these loss rates, the apparent endorsement of the representativeness of areas, and the mere mention of an endorsement by the Denver Center in relation to the material on Page 105 surprise us for the following reasons:

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1. Study sites for these "predator control/livestock loss studies" are not randomly selected. Far from it. Undoubtedly, these study sites were areas in which some coyote depredation was reported since the purpose of the studies was to document coyote depredation on livestock. Indeed, some of the study sites, such as the Cook Ranch (Henne, 1975), were apparently selected or allowed to be used specifically because of high annual reported loss rates.

That the study sites were not randomly selected is emphasized by the results of the recent U.S.D.A. study (Gee et al., 1977) where it was found that 45 percent of the ranchers surveyed suffered no ewe or lamb loss and 67 percent of such ranchers suffered no ewe loss.

By definition, then, the studies used by the Fish and Wildlife Service, to the extent they are at all "typical", are typical only of the relatively small number of ranches where reported loss rates are substantial and significant. Clearly, these loss rates are in no way typical of loss rates for westwide livestock industry given the results of studies by Balser (1974) and Gee et al. (1977).

2. Knowledgeable Interior Department officials connected with the Cook Ranch study have described the loss rates found in the Cook Ranch study as "atypical", "worst case", and "excessive". Based on these opinions from knowledgeable persons (largely confirmed by Balser, pers. comm.), it is untenable that these results could be referred to as "typical".
3. The quoted total loss rates for those studies with control and those studies without control were incorrectly computed. In computing the loss rates (expressed as percents), the loss rates for ewes and lambs were added to derive a loss rate for sheep. For example, the quoted 36.3 percent loss rate for sheep (in the Henne 1975 study) was apparently derived by adding the 7.5 percent ewe loss rate to the 28.8 percent lamb loss rate (see Page 230, Study No. 7). Loss rates for the other quoted studies (Nos. 9, 10, 3, 5, 2) were calculated in the same way.

This method of calculation results in a "sheep loss rate" that is precisely double the actual rate, if we assume a 1:1 ratio of ewes to lambs. If the ratio is anything other than 1:1, the loss rate for sheep can only be computed by using a formula for a weighted average.

4. The inflated sheep loss rates are averaged to achieve theoretical westwide loss rates, with and without control. These rates are subtracted to derive a theoretical saving."

We have other concerns about the derivation of these inflated loss rates. The averages are based on a sample of only three studies each, from widely scattered areas in different years. Statistically derived confidence limits are not provided. The reader is not advised that the sample size is so small, and the conditions so variable, that statistically valid calculations cannot be made. Nor is the reader advised that without better data all the conclusions are without validity.

5. Subsequently, the calculations mentioned above form the basis for computing an inaccurate extrapolation to a "monetary savings" of \$93,819,600. The result of this extrapolation is probably even more inaccurate and inflated than the above inaccuracies alone would cause since there also seems to be some substantial inflation in the number of "sheep protected."

Gene, I find it unbelievable that the Denver Center endorsed any of the calculations on Page 105 of the DEIS. If it did, I suggest that the procedures for providing endorsements by responsible Federal Research Centers need to be tightened substantially.

In any event, the mere mention of the Denver Wildlife Research Center in the context of the obviously inaccurate and poorly conceived calculations appearing on Page 105 can only seriously undermine the credibility of the Center.

I would appreciate your prompt clarification of the extent of the Denver Wildlife Research Center's participation in these calculations and the extent of its endorsement.

Thank you for your attention to this matter.

Sincerely,

John W. Grandy
Executive Vice President

cc: Hon. Cecil D. Andrus
Hon. Charles Warren
Hon. Robert L. Herbst
Hon. Richard J. Myshak
Hon. Lynn A. Greenwalt
Mr. Richard D. Curnow
Mr. Gordon T. Nightingale
Mr. Clarence Faulkner
Interested Parties



United States Department of the Interior

ADDRESS ONLY THE DIRECTOR,
FISH AND WILDLIFE SERVICE

FISH AND WILDLIFE SERVICE
WASHINGTON, D.C. 20240

In Reply Refer To:
FWS/WER

JAN 30 1979

Dr. John W. Grandy, IV
Executive Vice President
Defenders of Wildlife
1244 19th Street, NW
Washington, D. C. 20036

Dear Dr. Grandy:

This responds to your letter of January 9, 1979, commenting on the Fish and Wildlife Service's Draft Environmental Impact Statement (EIS) on Mammalian Predator Damage Management for Livestock Protection in the Western United States.

You are correct in stating that the sites selected for the "predator control/livestock loss studies" are not typical of the westwide sheep industry. Their selection was certainly not random. They were selected because the investigators involved knew that losses to coyotes were to be expected, thus making research on the effects of control or lack of control possible. We appreciate your remarks; the implication that they are somehow typical of the loss situation westwide will be corrected in the final EIS.

Your comment on the loss figures is also well taken. The data were properly collected and presented in the original reports, and the figures will be correct in the final EIS.

We appreciate your bringing these items to our attention.

Sincerely yours,

J. Eugene Hester

Associate Director-Research

Table 3-17.

Comparison of Sheep Losses to Coyotes
^{1/}
 With and Without Predator Control

	EWES	LAMBS
LOSSES WITHOUT PREDATOR CONTROL (%) KILLED)		
One Montana ranch (average 1974-75) (<i>Home</i>)	7.8	26.5
One New Mexico ranch (average 1974-75)	0.45	12.1
One California flock (summer 1976)	1.4	6.2
Averages	<u>3.2</u>	<u>14.9</u>
LOSSES WITH PREDATOR CONTROL (%) KILLED)		
One Nevada flock (1973)	0.1	5.8
Nine Idaho flocks (average 1973-75)	1.3	2.3
Ten Utah flocks (average 1972-75)	0.0	4.8
Five Wyoming flocks (average 1973-75)	0.5	4.2
Averages	<u>0.5</u>	<u>4.3</u>
WESTERN SHEEP INVENTORY, 1977		
^{2/} (millions of sheep)	^{3/} 8.733	6.541
ESTIMATED LOSS WITH PREDATOR CONTROL		
(1,000 head)	43.7	281.3
^{4/} (value, \$ millions)	1.85	16.0
POSSIBLE LOSS WITHOUT CONTROL		
(1,000 head)	279.9	974.6
^{4/} (value, \$ million)	11.85	55.6
DIFFERENCE IN LOSS, WITH AND WITHOUT CONTROL		
(1,000 head)	235.8	693.3
^{4/} (value, \$ million)	10.0	39.5

^{1/} For additional data and references, see U.S. Fish & Wildlife Service (1978 21-25, sources 2-5 and 7-10).

^{2/} From Table 1-10

^{3/} Stock sheep, most of which are breeding or replacement ewes.

^{4/} Based on values per head of \$42.40 and \$57.00 for stock sheep and lambs, respectively.

Mr. DE LA GARZA. Mr. Randall, do you have a statement or comment to make, sir.

Mr. RANDALL. No, sir. I helped to prepare this statement.

Mr. DE LA GARZA. Thank you. Mr. Wampler?

Mr. WAMPLER. Thank you, Mr. Chairman.

Dr. Grandy and Mr. Randall, I appreciate both of you coming and appearing on behalf of yourselves and the organizations that you represent.

You have given us a very comprehensive statement and one to which I would like to give additional study and thought if time presents me the opportunity.

I gather, from the thrust of your statement, Dr. Grandy, that you feel that the statistics that have been given to this committee by the livestock sector that indicate they are suffering substantial losses due to predators are overstated. Is that correct?

Mr. GRANDY. Based on the data, yes, sir. As I said in my statement, at least the mail survey data and, indeed, even the method of calculation used by the Fish and Wildlife Service to estimate losses are biased for reasons that I gave in my statement.

I do not deny and, indeed, understand that individual losses on individual ranches do occur. That is clear from the data.

What is inaccurate in the way the figures are put together is that they take data from those areas where losses are highest, average a few ranches, and apply those figures westwide. We know, from USDA studies, from Mr. Randall's work in Wyoming, and the work of our other field representatives throughout the West, that livestock loss to predators is a spot occurrence. It is localized.

The Fish and Wildlife Service recognized that years ago. That is why an average solution to the problem simply will not work.

Mr. WAMPLER. On page 14 of your statement you said:

Indeed, if it were not for the direct or indirect subsidies provided by low public land grazing fees, incentive price supports for shorn wool, and import duties on foreign wool, among others, part of the American sheep industry might be largely out of business by now.

You also refer to the fact that New Zealand and Australia seem capable of raising sheep and lambs. Are you aware of any government regulations that exist in New Zealand and Australia that are similar to those facing the American industry?

Mr. GRANDY. No; I am not familiar with New Zealand's or Australia's regulations.

Mr. WAMPLER. What types of predator control programs do they have in New Zealand and Australia?

Mr. GRANDY. I am not familiar with them.

Mr. WAMPLER. That could be a very significant reason why the cost of production is so much higher in the United States. We find this repeatedly concerning regulations that are placed on all segments of American agriculture. It is something that is very basic and fundamental.

These costs due to regulations have to be passed through to the consumer who is the one who ultimately pays the bill.

We are trying to address some of the causes of inflation in this country. Needless Government regulations are a contributing factor to our decline in productivity.

I think this is a significant point. You are making a comparison, saying that farm producers in New Zealand and Australia can produce cheaper but we need to know why. Are we competing on the same basis or are we regulated on the same basis?

Mr. GRANDY. Clearly that is so. Do they have to support the same public land values under their constitution that we must support under ours?

Mr. WAMPLER. However, you are not aware of the differences in regulations.

Mr. GRANDY. No, I am not, but one point should be made. Even to the extent that there are differing predator control regulations in this Nation from those in Australia which are a factor, you are still dealing with a highly localized problem.

Mr. WAMPLER. I do not dispute that. What I am saying is that you made a comparison without knowing for sure what the difference in the regulatory situations is. It could be a significant difference.

Also, on page 18 you indicated your strong support for the decision of Secretary Andrus in his memo of November 8, 1979. Could you enlighten us on why you feel the Director of the Fish and Wildlife Service did not agree with that statement of policy and why the Assistant Secretary of the Interior, who has direct jurisdiction over this area, also disagreed with the Secretary?

Mr. GRANDY. I think they made a mistake.

Mr. WAMPLER. You mean the Secretary made a mistake?

Mr. GRANDY. No. I think the Assistant Secretary made a mistake to the extent that he disagreed, and the Director did to the extent that he disagreed. Clearly they were in error.

Mr. WAMPLER. Oh, I see.

Mr. GRANDY. The only continuous time stream data that exist for the western livestock industry in terms of predator loss and livestock numbers, et cetera, indicate that the advent of 1080 and, indeed, its continued massive use never worked anyway.

There is no reason to study in minute bits 1080 anymore when 30 years of data show that it does not work.

Mr. WAMPLER. That statement is contrary to much of the testimony that we received yesterday from people who are rather eminent in the field of science who felt, to the contrary, that we should continue this research to find the answers.

One of the reasons, apparently, that the Secretary of the Interior gave for his decision was that it is too politically sensitive, that he was fearful of lawsuits, and it was not a politically acceptable decision to do otherwise. This leads me to believe that, simply because the Secretary of the Interior refused to accept the recommendation of the professionals in his own Department, it was more of political decision than a scientifically sound judgment. That happens to be my feeling on the subject.

Mr. GRANDY. I understand your point but my guess would be that the Secretary considered a variety of factors in making his decision, not the least of which was the fact that 1080 never worked.

I want to address one additional problem—I was not here yesterday, but Mr. Randall was here for the duration of the hearing yesterday. The opinions that I saw presented in the testimony, which he brought back, clearly demonstrate just what we have been talking about through our whole statement. There are a lot of opinions that 1080 might work.

The only continuous data that we have of operational control for 30 years show that it does not work. All opinions to the contrary, the Secretary was forced to make, by virtue of law, his decision on the basis of the data.

Mr. WAMPLER. I would have to respectfully say that apparently there is a division of opinion on that among scientific authorities. I think the literature shows that there is a division.

Mr. DE LA GARZA. Will the gentleman yield on this point?

Mr. WAMPLER. Yes.

Mr. DE LA GARZA. I would like to read from a letter which I received, dated April 10, 1980, from Mr. Daniel A. Poole, president of the Wildlife Management Institute. In part the letter reads:

You should understand that the institute is not unalterable opposed to the use of 1080. Very recent research results reportedly indicate that the compound can be a highly specific poison for coyote control when meticulously applied at the proper time and places by competent individuals.

Use of 1080 in the new toxic collar being developed may be especially effective. Consequently, we do not think that the application of 1080 should be ruled out completely.

Mr. GRANDY. I, and certainly the organizations that I am representing today, disagree with that. We find no support for it from the data that we have reviewed.

I think there is a more significant problem, if I may just address it for a moment, particularly with respect to 1080 but also with respect to any of the nonselective secondary poisons that we have used. The data do show that they do not work. The problem is that those poisons—the potential for their use and, indeed, the argument that we are going through here today—are providing the industry and, I believe, in some cases yourselves with false hope that something is going to happen and are stopping us, the conservation community and the Congress and the industry from agreeing to give the industry the help it needs.

What it needs, as the Bureau of Land Management said, as did the Advisory Committee on Predator Control of which I was a member, is—the single most significant problem facing that industry is the lack of adequate labor. Apparently, there was no predator problem pre-1940. The industry reached its zenith before any of these chemicals were ever developed.

The idea that we have to go get these chemicals now is simply a diversion that is stopping the industry from addressing its real problems, and it is, indeed, stopping the Congress.

Mr. WAMPLER. If I may follow up on that, on page 21 of your statement you recommend some additions which should be made to the Andrus initiative. For example, you urge that the Congress "provide, through the appropriations process, sufficient earmarked funds to allow recruitment and training of sheepherders."

From where would you propose to recruit them—in this country, abroad, or where?

Mr. GRANDY. In either place. If I recall, this morning General Motors laid off 10,000 more people yesterday. There are probably going to be a lot of people looking for employment very soon.

Mr. WAMPLER. Do you think many of them are going to go out and become sheepherders? Do you think that?

Mr. GRANDY. I think, of course, you have to provide wages. You cannot give nothing to these people.

Mr. WAMPLER. Let us be a little more specific. What would you consider to be a fair wage for a sheepherder? Would you say the minimum wage?

Mr. GRANDY. I am not familiar with that detail. I have been with sheepherders and I have been on the open range with them, but I never asked them what they made and I never asked them what they considered fair.

Mr. WAMPLER. Obviously, then, you have given no thought to what the cost estimates of these recommendations are that you made.

Mr. GRANDY. I have given some thought to the cost estimates.

Mr. WAMPLER. Will you share them with us?

Mr. GRANDY. My first thought is that we are spending nearly \$18 million, as the Interior Department's own Office of Investigation said, without being able to show that we are helping the livestock industry one whit.

BLM suggested that a great part of that \$18 million be used to train and equip sheepherders and to subsidize them if it is necessary.

The Congress has provided, and I do not say incorrectly, numerous subsidies to the livestock industry. I think this is a subsidy that would really help them. Yet it is one that has been consistently avoided.

I suggest that you would have the broad support of the livestock industry as well as the conservation community for those effort

Mr. WAMPLER. I asked this question of a number of the witnesses yesterday. I think, without exception, they said that type of labor simply was not available in their areas.

Mr. GRANDY. If you do not pay for it, it is not available.

Mr. WAMPLER. That may be another question. They just said that this was marginal type labor. It was not available and that they could not bring foreign nationals into this country because of the restrictions on it. Apparently, they have tried it. At least that was their inference in the testimony yesterday.

You make a suggestion and, again, when I ask for a specific—you have given me one. You suggest transferring the \$18 million over to this. If it is going to cost that much, at least that is an effort to quantify it.

Let me ask you this. Have you or any of the organizations that you are representing here this morning ever sued the Secretary of the Interior, that is, brought legal action against him?

Mr. GRANDY. Yes, sir.

Mr. WAMPLER. Was it on a continuing basis? Does it occur with a great deal of regularity or what?

Mr. GRANDY. I cannot speak for all of the other organizations. Defenders of Wildlife has sued the Secretary. I think we sued him once in 1979 and once in 1980.

Mr. WAMPLER. I was kind of curious since that was one of the justifications for the issuance of his new statement of policy—fear of law suits. I just assumed the Secretary is sued almost daily. Many of the laws that he administers are of a controversial nature—

Mr. GRANDY. That is clearly correct. One thing is that we have been winning a lot of the lawsuits. The Secretary does not have to worry about us winning if he is complying with the law.

The only standard that exists in the laws under which he was operating in making this decision are the arbitrary and capricious standards which, as Congress knows and as lawyers well know—I assume most of you are lawyers—are the hardest suits to win. The only way you can win an arbitrary and capricious suit is to show that the Secretary did not make a decision on the basis of the data.

To the extent that he did not endorse the use of 1080 because he was fearful of the results of lawsuits, I suggest says something about the quality of the data.

Mr. WAMPLER. I am not implying that you do not have the right to sue him. I would be the very first to defend your right to do that.

Let me ask you one final question. This is in the nature of a hypothetical. Most of the testimony has revolved around the coyote as being the principal predator responsible for losses, particularly to the sheep and goat industry in this country. While I am sure there are others—the golden eagle being one—coyote seems to be the main one.

If we were of a mind to do so, do you feel that using every known method, that we could exterminate the coyote in this country and render him an absolutely extinct species? Would that be possible in your mind?

Mr. GRANDY. I am certain it is possible.

Mr. WAMPLER. You think it is possible.

Mr. GRANDY. Of course. Anything is possible.

Mr. WAMPLER. Do you think the coyote is in any immediate danger of becoming an endangered species in the country?

Mr. GRANDY. I doubt it, although its populations are clearly reduced in some areas. It depends upon whether you are speaking of local geographic areas, statewide, countrywide, or nationwide.

Mr. WAMPLER. Will you tell us, in your opinion, is the coyote population larger today than it was 10 years ago in the country as a whole?

Mr. GRANDY. I have not done any specific research. The only data of which I am aware are trend indexes provided in the final environmental impact statement which show that coyote populations have been reduced over large portions of the West in recent years. I am not familiar with the last 10 years specifically. I could certainly refresh my memory from those tables and provide the answer for the record.

Mr. WAMPLER. It would be fair to say that there is no immediate danger of it becoming an endangered species. Is that correct?

Mr. GRANDY. You are asking about the species as a whole, and I would say, not nationwide certainly.

Mr. WAMPLER. I again want to thank you for a very comprehensive statement. I assure you that I will carefully review it.

However, I must say candidly, as one who has served on a committee that has some responsibility to help assure an adequate supply of food and fiber not only to our population but to much of the world, that we have to be examining ways to increase production. As a consumer, I want to get the best quality food in this country at the lowest possible price. I think we all want to see that happen.

Here we have an obvious conflict between legitimate concerns for the environment and for wildlife on the one hand and then, on the other hand, the pure economics of production.

It was testified to yesterday by the commissioner of agriculture in Texas that there is a tremendous potential for export markets, particularly for lamb, that cannot be utilized. I think we have put a great deal of emphasis on loss of production in these hearings.

I think what we also need to look at is what the potential for increased production would be if we had some effective way of minimizing predator losses to the livestock industry. Apparently, a lot of people made the decision to get out of it simply because of this, and other reasons, one of which is inflation and the increased cost of production. That is also something that this committee needs to look at.

We should ask: Is there a reasonable way that we can satisfy everyone's concerns? I am not sure that there is, but I certainly want to try to find it.

Mr. GRANDY. As I understand it, this committee also has responsibility for significant segments, through the Forest Service and other services, of the public lands of this Nation and it understands the necessity of maintaining viable wildlife populations.

Mr. WAMPLER. Oh, yes. We definitely want to do that.

Mr. GRANDY. That may, in some cases, be a necessary and built-in factor in your least cost equation.

Mr. WAMPLER. Yes, sir. I quite agree with you. That is what we will attempt to do.

I do, again, want to thank you for your very fine statement.

Mr. RANDALL. I think, Mr. Wampler, that one of the reasons why we are not getting changes is that the status quo is always such a comfortable thing. To deviate from something that we have done for so many years is really a challenge. To go off in a different direction and learn new things in trying to solve a problem is a heck of a challenge.

I think somebody has to take the first step and get out and prove that some of these things will work in solving the problems.

Mr. WAMPLER. I agree that that is a worthy thought. The thing that does concern me, as I stated yesterday, not particularly in the case of the Secretary's memorandum of last year, is what the regulatory agencies right across the spectrum of Government are doing, making political decisions and not relying sufficiently on the scientific data available.

This is why I am at a loss as to why Secretary Andrus decided to terminate any further research on 1080 when people I have talked to who have testified before this committee say that they are making progress and that it did offer hope. It leads me to conclude that the Secretary made a political decision rather than one based on sound scientific data. I just have to feel that way.

I can cite you any number of instances—the USDA and FDA on nitrites as a preservative in food. We have any number of these before us at the moment. We need to start making these decisions on the basis of the best scientific data available, not on the basis of whims to satisfy one interest group or the other—livestock producers or whoever it might be.

Let us go to the laboratory and try to find answers to these things rather than having them made on a political basis. That is my concern.

I certainly do not object to any new or anybody's ways of trying to find answers. I would put that generally under the heading of research using a basis of good sound scientific data, the best that is available to us.

Mr. DE LA GARZA. I agree 100 percent with your statement, Mr. Randall. As a matter of fact, that is why we introduced this bill.

Mr. GRANDY, I find myself almost living the words that I said yesterday. I regret that you were not here. We were hoping to shed some light on this problem. When people are polarized, that generates only heat, never any light.

Throughout my life I have considered myself a defender of wildlife. My legislative career in the State legislature and here would, I think, further substantiate that fact. I do not find myself at all in disagreement with the between-the-lines philosophical approach which you bring us.

However, I do suggest, with all due respect, and I get the feeling that you have to oppose this bill. Therefore, you had to find ways to oppose it. The things you say you want to do are the things that we want to do, but you have taken and dissected the bill on specifics and criticized us for not recommending specifics. That is exactly what we were trying to get away from.

We want the research done by the qualified people. I could have said in the bill: "Use this specific chemical." That is not what we wanted to do. We wanted to have the experts continue research.

You say 1080 is not good. Mr. Poole says it is. I want someone out there that is an expert to continue the research.

Mr. GRANDY. I do not say that it is not any good, Mr. Chairman. I say it does not work. The data show it does not work.

It works to kill coyotes. There has never been any argument about that. Unfortunately, the data show very clearly that killing more coyotes does not help the industry.

Mr. DE LA GARZA. We agree. However, we are trying to use this collar that is selective. I agree with you. I do not want to go kill every coyote that is on the range. We do want to get rid of the one that becomes a predator by instinct.

What more selective method can you have than one that gets him when he gets his jaws on the neck of the animal? How much more selective can you be?

Mr. GRANDY. One of the major problems with 1080 in that regard is that it is an acknowledged secondary toxicant.

Mr. DE LA GARZA. That is not what the experts say. Have you read the testimony of Dr. Kun?

Mr. GRANDY. That is what the data say. The opinions of experts are, frankly, worth no more than the opinions of laymen unless they are backed by the data.

Mr. DE LA GARZA. They are backed up by data. That is why I am sold on the 1080 collar.

I detest denning. Yet the Secretary has approved it. Yesterday, the Assistant Secretary said, "We will shoot the pups." I would place them in a zoo. I would give them to a circus. I would do something.

In my area where a coyote is shot on sight, they do not shoot the pups. I am in complete disagreement with the Secretary when he says that they have no alternative but to shoot. They are taking the place of God when they say "if he is going to die of starvation".

I agree with you, but these people have a problem. Saying that it is an economic problem that somehow has no solution because Australia and New Zealand can sell cheaper here is begging the issue. Of course, you do not have all the facts as to why it is they can sell cheaper.

The only facts I have is that they are able to produce cheaper. Conceivably that is because they do not have restrictions. They probably have lower wages.

Everyone who undersells the American product undersells it because he has lower wages, no protection for the employee, and no desire to be fair and equitable with the profits of their productivity. We do not do that in the United States.

Where in the bill do you find that we provide more money to kill massive numbers of coyotes?

Mr. GRANDY. You provide the techniques for killing the numbers of coyotes which will inherently—

Mr. DE LA GARZA. Where in this bill do we provide more money for massive killing of coyotes?

Mr. GRANDY. You provide the techniques and the direction that will allow the massive killing of coyotes.

If I may just address a couple of points with respect to the collar—

Mr. DE LA GARZA. Where do we provide the techniques for massive killing of coyotes?

Mr. GRANDY. The use of 1080 is a mass killing technique. It is inherently—

Mr. DE LA GARZA. We want to use it selectively in the collar.

Mr. GRANDY. It is inherently uncontrollable when put in the hands of ranchers, to which Mr. Randall will testify at some length if you like. Indeed, the only problems for which anyone has suggesting using a collar, whether it be 1080 or some other nonsecondary toxicant, are in farm flock situations.

The data show conclusively that farm flocks are not the places with problems.

Mr. DE LA GARZA. How do you suggest that you would have massive use of 1080?

Mr. GRANDY. I suggest that it would be uncontrollable. It takes very little to kill. You can dismantle a collar.

The worst part of the whole 1080 problem, the collar or any other part of it, is that it provides the industry with some hope that does not address the real problem. The problem is labor. If they had sheep-herders out there with the sheep, they would not need 1080 collars and they would not need strychnine. They would not need thallium. They would not need anything.

Mr. DE LA GARZA. Let me go back now. How would you use 1080 indiscriminately? Where would you put it? If you were an indiscriminate user, a noncaring individual, and you wanted to kill every coyote on your ranch, how would you use 1080?

Mr. GRANDY. If I were going to do it, I would do it the way it has always been done. I would put out 1080 place baits. I would put out 1080 this. I would put out 1080 that.

Mr. DE LA GARZA. I do not want this and that. Give me specifics.

You have been out there, Mr. Randall. How would you use 1080 if you had no restrictions whatsoever and you wanted to kill every predator on your range?

Mr. RANDALL. There are several ways to do it. There were always carcass baits, the approved type of bait. That was a 1080 solution injected into sheep or into horse carcasses that had been butchered. Many times jack rabbits, prairie dogs, and other things like that, were used and tied to sage bushes. This kind of thing, of course, attracts raptors too.

There are many ways to use 1080. Referring specifically to the collar, I believe this would be a very limited use because in the open-range type sheep industry, which is a large part of the West, I do not see how you could use a toxic collar at all. The theory of it is, if you have predation in a pasture, to move the sheep out, put the collar on a couple of Judas lambs, leave them in the pasture until the killing stops, and then move your sheep back in. This would be unworkable in large pasture type situation where you would have to move a lot of sheep. It would also be unworkable on the open range.

Mr. DE LA GARZA. Why would you think it would be unworkable?

Mr. RANDALL. On the open range the sheep are there. What would you do with them? You could not put collars on the whole herd of 2,000 or 3,000 sheep.

Mr. DE LA GARZA. That is agreeable. I do agree with that.

Do you not think that it works by sending in a group with collars to an area where you need to send them and you know that predators, or at least a coyote predator, might be working?

Mr. RANDALL. You would somehow have to separate the Judas sheep from the herd in order to get a probability that the coyote would kill that sheep rather than—

Mr. DE LA GARZA. I am placing you in the position of an expert in the field. I understand that is what you have been.

Everything being equal, if you were to use 1080—disregard the fact that you do not agree with it—which way would you use it?

Mr. RANDALL. You mean, provided that I wanted to go out and kill as many coyotes as possible. Is that what you mean?

Mr. DE LA GARZA. No. I mean, if you wanted to use 1080—

Mr. RANDALL. And do it in a very environmentally sound way—

Mr. DE LA GARZA. Right.

Mr. RANDALL. I would lock it in the safe and throw away the combination and never open it.

Mr. DE LA GARZA. You did not answer my question.

Mr. RANDALL. I do not know of any way, sir, that I could use it and feel responsible that I was doing something that should be done. I do not believe that there is a place for this toxicant in the field.

Mr. DE LA GARZA. Do you know if there is any other substitute? I guess we are back to the fact that you want herders—1,000 of them around 1,000 sheep. You want to make a fence of sheepherders.

Mr. RANDALL. There are many methods, sir, that can help alleviate this problem. Certainly, as many other witnesses have testified, there is no panacea that is going to control coyotes, so we have to use a whole variety of things. Guard dogs are one things, but it takes a certain kind of a person to be able to use a guard dog.

Mr. DE LA GARZA. Where in the bill do you see that we say, "Do not use guard dogs"?

Mr. RANDALL. I do not see that. We are just saying that this is something that should be developed—

Mr. GRANDY. They should be endorsed and set as a priority.

Mr. DE LA GARZA. I feel so badly that you would take the bill apart. On page 4 we say, "Use preventive control techniques to manage offender predator populations."

I do not know. I did not want to go naming this one and that one to use. We want you to provide input to the Department so that we can arrive—I agree with you.

If we could provide for more sheep herders, that would be fine.

Mr. GRANDY. Preventive control has a meaning in terms of the animal damage control program that you may not have intended in the bill.

Why could you not have endorsed, for example, all possible non-lethal techniques, including those that have been proven operationally in Saskatchewan and other places, such as the use of guard dogs, and have provided support for them?

Mr. DE LA GARZA. You are nitpicking. I did not know what had been used in Saskatchewan. That is why I want the research.

Mr. RANDALL. Mr. Chairman, I have done an awful lot of preventive control, and I have killed thousands of coyotes. Most of the work I did with Fish and Wildlife was preventive control which is prophylactic control. That is killing as many animals as you can.

In the 1971-72 Wyoming winter, we called in three aircraft to Rock Springs simply because we had 4 or 5 feet of snow. Under conditions like that, all the predators surface. They have no holes and draws to hide in.

You can fly 500 feet in the air and look out a mile away and see a coyote. We slaughtered coyotes that winter.

Mr. DE LA GARZA. Unlike you, I do not want to slaughter coyotes.

Mr. RANDALL. This is what we did—

Mr. DE LA GARZA. You are ahead of me there—

Mr. RANDALL [continuing]. As preventive control.

I have kept track of all the loss records and trouble calls. The following spring I had just as many or more trouble calls as I had the year before, and we had wiped out 50 percent of the coyote population in lower Wyoming counties that winter.

Therefore, I cannot see a relationship between the number of coyotes and the amount of predation. Obviously, if we had one coyote in 100 square miles, we would have less predation than if we had 100 coyotes, but natural fluctuations do not seem to have a whole lot to do with the amount of predation.

Mr. DE LA GARZA. Now I find myself in disagreement with you. I do not want to have massive killing of coyotes. I do not want to slaughter coyotes. I only want to get the 1, or 2, or 3 out of the 100 that become predators. That is why I am sold, with what little scientific knowledge I have and specific data, on the collar and 1080.

I find myself in disagreement with you now.

I am going to wind up being by myself and in disagreement with everyone.

Mr. GRANDY. I was in disagreement with Mr. Randall too, when he worked for the Fish and Wildlife Service and he did all these things.

I think our point is that we should address—and we should not shrink from addressing—the real problems. The real problems are

that there is an inadequate labor supply. Once we have dealt with that problem and once we can invoke some nonlethal controls that have worked and are being used operationally—although you may not have known they were being used before we came, you certainly know it now—if we still have a predator problem we can come back and try some other things.

There is no reason to kill American wildlife if we do not have to.

Mr. DE LA GARZA. No one wants to kill wildlife. I agree with you. I am probably more of a defender, with all due respect, than most members of your organization are.

It is simply that we have a problem. I accept your honest offer to work with us. I think we can work together.

You see, I have been exposed to massive scientific data that I have no personal way of refuting. The figures are there. The research is there. I have spoken to the scientists. They are certainly knowledgeable and respected in their fields.

My people say that generally there is a problem. The question is: How do we solve that problem? I am an advocate of legislation as the art of the possible. I do not believe in creating a massive bill because it sounds good which makes you feel better even though you have not done anything. I do not operate that way, nor do members of this subcommittee.

We are looking for a solution.

I guess there is a way under CETA, or other programs, to provide for more sheepherders. In my area you cannot get them. You have to get them from other countries—Mexico or Spain, sometimes Germany or Austria—but the Immigration Department will not let them in.

They have told me, "Tell your people not even to apply. We will not let them in."

I can personally attest to the fact that the social programs of this country are such that a fellow can live more comfortably without working than going out and working for 2, 4, or 6 weeks out on the range.

You could not give us any information on pay and I do not know where we would be on that, but I do disagree with your economic analysis. You said that once we get to the economic point of no return then we can forget the industry, just dump it out of the window. We have a responsibility—

Mr. GRANDY. I am not saying that. I suggest that you have just outlined a few problems that this committee would be able to address. We would be happy to help you and I am sure the industry would be happy to help you in terms of getting the wages right, how to provide the right incentives, and how to get people in here—

Mr. DE LA GARZA. The statement from you is that you have some technical objections to the way the bill is written. You really have no objection to the thrust of what we are trying to do. Is that right?

Mr. GRANDY. I stand with my statement. We object to the bill on many grounds, but primarily because we feel it simply does the wrong things at the wrong time.

Mr. DE LA GARZA. I respect that opinion of yours. Your philosophical viewpoint is that there is a problem that has to be addressed—

Mr. GRANDY. The problem is with the industry.

Mr. DE LA GARZA [continuing]. And you are willing to work with us in addressing that problem.

Mr. GRANDY. Absolutely.

Mr. DE LA GARZA. I think, with good faith and some diligent work—certainly cannot escape the fact that we need research. That is one of the areas in which we provided for the continuation of research on 1080 and "applied field research relating to nonlethal animal damage control techniques and the effectiveness of economically feasible husbandry practices in reducing livestock losses."

There our bill says what you said.

Mr. GRANDY. That is right. I think we could probably all agree on that if you knocked out the rest of the bill.

Mr. DE LA GARZA. We do agree on that part.

On 1080 we emphasize "selective and environmentally preferred lethal and nonlethal toxicants." You say, "no toxicants at all."

Mr. GRANDY. We mean no secondary toxicants. No toxicants should be used which are not necessary. Our view on whether or not something was necessary would be formed after you had an adequate labor supply and had exhausted some nonlethal control techniques. Then we could make a decision on that.

Mr. DE LA GARZA. I agree with you on that. Perhaps if we had a little more time, we would wind up writing a good bill here. I guess I mean to say, a better bill. I think it is a good bill.

I do not want a toxicant that has secondary effects and you do not either but if there were one that does not have secondary effects and could be used selectively, that is what I am trying to get at and that is what you are trying to get at.

Mr. GRANDY. That is what we are trying to get at.

Mr. DE LA GARZA. I think we can work something out.

Mr. GRANDY. We are also trying to get at some other problems that I think we outlined in detail. I would hope this committee would want to get at them as well.

Mr. DE LA GARZA. Do you mean, related to this problem?

Mr. GRANDY. I mean, related to labor and implementing the non-lethal alternatives which have already been proven and used operationally in other areas.

Mr. DE LA GARZA. I am going to instruct the staff to try to get some more information on the labor situation.

The testimony which we have had here from landowners and the people who run sheep and goats said that it is very difficult. Perhaps we might check with labor and work on that.

That is a method, not the method.

Mr. Randall, what do you say? Can every loss to a predator be avoided by having a sheepherder?

Mr. RANDALL. It will depend a great deal on the sheepherder. I do not think every loss could ever be avoided but certainly they could be cut down to an acceptable level.

Mr. DE LA GARZA. In other words, it would depend on whether or not he is a good one.

Mr. RANDALL. It takes some experience. Sheepherding is not something in which you just go out with a staff and walk around. It is very intricate. They have to be very dedicated.

Mr. DE LA GARZA. You have to inherit the art from your father who is a sheepherder.

Mr. RANDALL. That would be desirable, but I believe in a good training program we could turn out some very good sheepherders.

Mr. DE LA GARZA. That is why you bring the Basques from Spain, who are third or fourth generation sheepherders. You find me a second generation sheepherder in Wyoming and I will buy him. [Laughter.]

Mr. GRANDY. We used to have some wonderful old Mexican sheepherders.

Mr. DE LA GARZA. We do not anymore. Immigration will not let them in.

Mr. GRANDY. I do not think you can buy and sell people.

Mr. DE LA GARZA. You are right. I agree with you.

It is something you have to feel, something born in you. You have to love the sheep. You have to love the range. You have to feel the vibrations of that grass on your feet when you walk out there.

Mr. RANDALL. It sounds like you have been there.

Mr. DE LA GARZA. I have, sir. There are no more of those people. I do not think you can train them in the Labor Department training programs.

Mr. RANDALL. I think we could provide some incentives for training. This has been a completely neglected area. We have never tried.

We have some sheepshearing schools and things like that—

Mr. DE LA GARZA. Do you not want us to bring the sheepshearers from Australia?

Mr. GRANDY. Who said that?

Mr. DE LA GARZA. A witness yesterday said it.

Mr. GRANDY. Those people I keep hearing about who are being laid off are going to be willing to shear about anything.

Mr. WAMPLER. The law of the land is that they cannot come in.

Mr. Chairman, may I make one brief observation, even though I have taken way too much time with the witnesses?

Mr. DE LA GARZA. I think I have too.

Mr. WAMPLER. Let me say, in all sincerity, this committee finds itself constantly caught up in the throes of different legitimate concerns and interest groups. You know, we have people come before this committee from time to time who honestly believe that our agricultural policy should be a return to organic agriculture. They believe it for a variety of reasons.

There are many people who honestly believe that we should not use agricultural chemicals or pesticides. I am concerned about what the persistent and continued use of pesticides will do to the environment, but I would prefer to have the scientists tell me what effect they are having rather than people who speak with deep emotion on the matter.

I suppose it would be possible for us to demand the use of all pesticides and all chemicals and return to organic agriculture, but if we were to do that, who would make the decision as to what millions would starve here or there—because that would be the alternative.

Secretary Butz used to use this illustration. He said that when he was a boy on their family farm in Indiana, among his chores every summer was to take a wooden paddle and go out and swat potato bugs. If he did not do that they would devour the crop.

Now you can use a pesticide and control the potato bug and free that person to do something else. What has happened in the agricultural economy of this country is that fewer and fewer people are producing more and more. I submit to you that if every sector of our economy had done as much to improve its production as agriculture

has, inflation would not be the rampant problem that it is today. I am not saying that it would not be with us.

What we have to do here is to get some semblance of balance between desirable and achievable economic goals on one hand and then adequate concern for the environment on the other. Here is a classical example of these kinds of confrontations and clashes.

These great questions of public policy do not have easy answers, but we do have an obligation to weigh both sides of the equation.

Your presence here and your testimony certainly give us a valid point of view to which we will give adequate consideration. I join with the chairman in the hope that you will continue to work with us in finding areas of agreement and hopefully to eliminate areas where there is disagreement.

I thank you very much.

Mr. DE LA GARZA. Thank you very much.

We are informed that the full committee that is meeting next door needs two more members for a quorum.

We have been advised, as well, that Commissioner Douglass of West Virginia has arrived.

If you will stretch a minute and bear with us, we will stand in recess for about 5 minutes. Congress is also in session and we have a recorded vote, so the recess may continue for about 15 minutes.

[Recess taken.]

Mr. DE LA GARZA. The subcommittee will be in order.

We welcome you, Commissioner Douglass. Without objection, your full statement will appear in the record if you care to summarize or quote from it. We would appreciate your doing that.

Management Alternatives and thirdly, a Review of the Animal Damage Control Program, U.S. Fish and Wildlife Service. These documents evaluated the ADC Program and basically provided evidence that most of the existing practices have been demonstrated to be effective, relatively unharful to the environment, and essential for an adequate predator damage management program. In a written recommendation, to the Assistant Secretary, Fish, and Wildlife and Parks, Mr. Lynn A. Greenwalt, Director, U.S. Fish and Wildlife Service, also essentially endorsed a continued, viable ADC program.

The Secretary of Interior, however, issued a policy decision dated November 8, 1979, as to how predator control will be conducted by the Fish and Wildlife Service in the future that is contrary to the professional recommendations of wildlife managers and research information. In a document dated February 15, 1980, the Western Regional Coordinating Committee submitted A Response to Secretary of Interior Andrus' Policy Statement. This committee is composed of 26 of the leading predator control and research scientists in the United States. Their response is very critical of the new policy announced by Secretary Andrus. They believe it to be a political policy rather than one based on research data and they believe it will not provide adequate protection to livestock. On behalf of NASDA, I want to express our strong support and endorsement of the Response as submitted by the Committee.

Mr. Chairman, the livestock producers and the related economies of many states have had their backs shoved against the wall. They are literally faced with a struggle for survival. We seriously doubt if the Congress intended the Department of Interior, Fish and Wildlife Service, to interpret their mandate and to implement an operational control program that is contrary to professional recommendations, experience and research findings, and would in all probability continue to impact so adversely and severely upon these groups.

Mr. Chairman, based upon this oral testimony before you today, and additional information contained in our written testimony, we would like to present the following findings and recommendations:

Charged with the responsibility to control predators under the Animal Damage Control Act of 1931, the Fish and Wildlife Service record of USDAFIS is that they disagree with the recommendations of the Western Regional Coordinating Committee. H.R. 6725 would

make control and research a joint effort between USDI and USDA. We do however, believe this would complicate things because the two Departments have different goals and different philosophies. We would prefer a transfer of ADC activities to the Department of Agriculture. However, we would rather have a joint control program than just a USDI program.

We recommend an amendment on page 4, that would insure that the programs and objective in H.R. 6725 apply to Federal lands as well as state and private lands. On page 4, line 24: Strike the period and add the words "on federal, state and private land." This is an extremely important concept especially in the western states. The federal control program is conducted under cooperative agreements with state and county governments and private livestock associations. In consideration of the intermingled (checkerboard) land status situation in the western states, control with all methods including toxicants and on all lands is essential. Control efforts at this time, especially with toxicants, are limited on federal lands because of Executive Order 11643 and a notice by the Environmental Protection Agency in the Federal Register (P.R. 72-2). Action should be taken to rescind these directives to allow for a complete and effective animal damage control program under this Act.

I would like to submit for the record copies of documents that pertain to and substantiate the issues I have presented today. They are:

1. A letter to Secretary Andrus from Dr. William P. Stephens, President, NASDA, expressing the policy of NASDA on the new ADC policy;
2. A resolution by NASDA supporting the experimental use of Compound 1080, or that the Federal government expend the necessary funds to reduce predator losses to an acceptable level by other methods, or compensate producers for predator caused losses above the levels of 1955;
3. Joint statement on the Federal role regarding animal damage control. Endorsed by: NASDA, National Cattlemen's Association, National Wool Growers' Association.

The National Association of State Departments of Agriculture

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James B. Grant, Executive Secretary

Stuart B. Hardy, Assistant Executive Secretary

D.M. Burkhead, Administrative Assistant

December 21, 1979

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Honorable Cecil D. Andrus

Secretary

United States Department of the Interior

Office of the Secretary

Washington, D.C. 20240

Dear Secretary Andrus:

This letter is to inform you of the opinion of the National Association of State Department of Agriculture (NASDA) on your recent policy directive regarding the Department of the Interior's Animal Damage Control Program (ADC). Obviously this is a sensitive subject with numerous aspects that you had to consider. However we believe the new policy is not in the best interest of either the agriculture sector or the country as a whole.

A survey conducted by the U.S. Department of Agriculture two years after the removal of toxicants by Executive Action, indicate that annual sheep losses, just to coyotes, west-wide in 1974 amounted to an average of about eight percent (728,200 head) of the lamb crop and two and one-half percent (229,400 head) of the adult herd. Losses at this level cost producers and consumers more than \$37 million. These general loss levels were the major reason that sheep producers discontinued sheep production in Utah and Wyoming.

You indicated that you relied quite heavily on the several well researched documents that evolved from the evaluation of the role of the Department of the Interior in predator management. We interpret these documents to basically provide evidence that most of the existing practices have been demonstrated to be effective, relatively unharful to the environment, and essential for an adequate predator damage management program. In a written recommendation, to the Assistant Secretary of Fish and Wildlife and Parks, Mr. Lynn A. Greenwalt, Director, U.S. Fish and Wildlife Service, also essentially endorsed a continued, viable ADC program.

We believe the new policy directive to be contrary to the professional recommendations of wildlife managers and research

A COOPERATOR WITH THE COUNCIL OF STATE GOVERNMENTS

indings. The new policy will not provide an effective program to control predators due in part to the following reasons:

1. The new policy directs that in the near term, preventive control should be limited to specific situations where unacceptably high levels of losses have been documented during the preceding 12 months. The policy also states that in the long term, the goal should be to minimize and phase out the use of lethal preventive controls, including creation of buffer zones and that corrective control utilizing non-lethal, non-captive methods should be emphasized.

It should be noted that an unacceptably high level of loss has not been defined. Also the methods for record keeping and documentation have not been prescribed. The reference documents indicate there are no non-lethal techniques available that will effectively reduce losses on a broad geographic scale. Until they are developed and tested, protection should be provided for livestock producers. The variety of geographic locations of ranch operations throughout the west thus requires the use of both lethal and non-lethal methods in a control program.

2. Until, and if non-lethal, corrective control methods are developed and tested, restrictions should not be placed on the use of the effective and environmentally safe methods presently utilized for animal damage control. The practices of denning and aerial shooting should definitely not be restricted.
3. The new policy directs that there will be no further research or development of potential uses of Compound 1080. However experience indicates that cost efficient protection of livestock requires an effective, species-specific control method which stops predators. There is compelling evidence that such an effective predicide exists that could be used efficiently with the cooperation of the Federal government. This predicide--sodium monofluoroacetate more commonly known as "1080"--has been under a ban by the Environmental Protection Agency since 1972. Specialists who have worked on the problem are convinced that definitive experiments would demonstrate that 1080 can be, and in fact has been, used effectively in a controlled manner against coyotes without endangering other species or humans and with little or no adverse environmental impact. Sound wildlife management principles also indicate that the survival of the coyote species itself would not be threatened. The end result would simply be protection for livestock when and where necessary. Presidential amendment of Executive Order 11643 of February 8, 1972, as amended by Executive Order 11870 of July 18, 1975, would permit such experiments and eventual operational use to be conducted by federal personnel on federal lands. NASDA is on record with a resolution (copy enclosed) supporting the experimental use of 1080 or that the Federal government expend the necessary funds to reduce predator losses to an acceptable level by other methods or compensate producers for predator caused losses above the levels of 1955.

The livestock industry throughout the West will be severely impacted by the new policy directive if it is to be implemented to the letter. On behalf of NASDA, I sincerely urge you to reconsider your decision in view of the evidence, the professional recommendations, and the adverse effects that a program conducted under the new policy would have on the livestock industry.

Sincerely,

W.P. Stephens
William P. Stephens
President

RESOLUTION NO. LUNREQ-8
(FOR NASDA USE ONLY)

SUBJECT OF RESOLUTION PREDATOR CONTROL

ORIGIN OF RESOLUTION NASDA

(Organization)

DATE OF ORIGIN July 23, 1979

NASDA STANDING COMMITTEE, RESOLUTION ASSIGNED LAND USE, NATURAL RES., ENV. QUAL.

Millions of acres of grazing lands, some of which are under the jurisdiction of the Department of the Interior and the Department of Agriculture, are infested with predatory animals. As a result thereof, it is not economically feasible for livestock producers to graze their livestock thereon, and food and fiber are being destroyed. These grazing lands could be effectively used, and great financial losses could be mitigated if those livestock producers were provided an effective program so as to control such predators.

The Act of March 2, 1931 directs the Secretary of Interior to control predators, and the federal government has chosen control methods and the level of control to be used under the Act of March 2, 1931; and producers' losses depend upon the federal government's choice of control methods and the level of said control effort.

Livestock producers need a quick-killing, species-specific control method which stops predators. There is compelling evidence that such an effective predacide exists that could be used effectively with the cooperation of the federal government. This predacide -- sodium fluoroacetate, more commonly known as "1080" -- has been under a ban by the Environmental Protection Agency since 1972. Specialists who have worked on the problem are convinced that definitive experiments would demonstrate that 1080 can be used effectively in a controlled manner against predators without endangering other species or humans and with little or no adverse environmental impact. Presidential amendment of Executive Order 11643 of February 8, 1972, as amended by Executive Order 11870 of July 18, 1975, would permit such experiments to be conducted by federal personnel on federal lands.

ACTION TAKEN BY NASDA STANDING COMMITTEE _____

ACTION TAKEN BY NASDA RESOLUTION COMMITTEE _____

ACTION TAKEN BY NASDA _____

BE IT RESOLVED, that the National Association of State Departments of Agriculture, meeting at Winston-Salem, North Carolina, on September 23-27, 1979, urges Presidential amendment of EO 11643 to permit experiments in the use of 1080 in a controlled manner, with due attention paid to safeguarding nonpredator species and the environment so that livestock producers may be provided in the near future with an effective tool to protect their livelihood, or in the event this is not possible, that the federal government expend whatever funds are necessary to reduce predator losses to an acceptable level, whatever the cost, or compensate producers for predator caused losses above the levels of 1955.

Mr. WAMPLER. I want to add my word of welcome to Commissioner Douglass to the committee. He has been before us on a number of occasions. He is an outstanding commissioner of agriculture in a sister State of my State of Virginia, which once was a part of Virginia, but that is a period in history that we will not go into this morning.

I do appreciate your fine statement. As you know, yesterday we heard from Commissioner Brown of Texas. He is a member of your organization and gave us some specific recommendations.

I have always found, Mr. Chairman, that the National Association of State Departments of Agriculture, in many respects, has a better perspective on the regulatory function than perhaps we, here in Washington, have. In large measure they are the ones who have to implement, or certainly coordinate the implementation of, many of the laws that Congress passes.

So, I think it is always appropriate that we hear from them and seriously consider their recommendations and take to heart their observations.

Again, we do appreciate your appearance here this morning.

Mr. DOUGLASS. Thank you, Mr. Wampler.

Mr. DE LA GARZA. Thank you, sir.

We recently lost a distinguished, dear colleague of ours from West Virginia, who was a great friend of agriculture, John Slack. To whatever extent you can, I wish you would bring our sympathies back to the people of West Virginia and the people of his district.

Mr. DOUGLASS. Mr. Chairman, I will certainly do that. He was a very good personal friend of mine. He was a Congressman from my own congressional district. We know his wife, son, and family well. I will convey your message.

Mr. DE LA GARZA. If you will do that, we would appreciate it. He was truly a public servant of national and international renown and was very helpful in the endeavors he undertook as a Member of Congress.

Mr. DOUGLASS. Thank you, sir.

Mr. DE LA GARZA. Thank you.

Our next witness is Ms. Marguerite Perkins of the Humane Society of the United States.

Ms. Perkins, we welcome you and would be very happy to hear from you at this time.

STATEMENT OF MARGUERITE PERKINS, LEGISLATIVE ASSOCIATE, HUMANE SOCIETY OF THE UNITED STATES

Ms. PERKINS. Good morning, Chairman de la Garza and members of the subcommittee.

I appreciate this opportunity to express my organization's views at this time.

I am Marguerite Perkins. I am legislative associate with the Humane Society of the United States. My educational background is in animal behavior and political science.

For the last 20 years or more I have traveled with my father, Dr. Marlin Perkins, and participated in game and wildlife management as well as predator control activities in South America, East Africa, South Africa, and Australia.

The HSUS is a national animal welfare organization with a constituency of more than 150,000. We have been involved since the mid-1960's in working to make the animal damage control program humane and selective.

During the last 2 years we have been involved in every part of the public decisionmaking process which the Department of the Interior has conducted on this controversial issue. The HSUS is in support of the secretarial policy decision which was finally made late last year.

Although there are parts of it with which we do not agree—aerial shooting, use of steel traps, and preventative control—we feel that it is an untested policy which, if implemented correctly, will eventually result in the selective and humane program our membership wants to see.

For this reason, I am appearing in opposition to H.R. 6725.

The sections of the bill which we could support—cooperation between the U.S. Departments of the Interior and Agriculture; emphasis on field research into selective, nonlethal, and humane toxicants and traps; and further study into the feasibility of husbandry techniques—are all embodied in the Secretary's current policy. Therefore, we feel those parts of the bill are repetitive and unnecessary.

The HSUS was a party to the original lawsuit which resulted in the ban of sodium monofluoroacetate or 1080 8 years ago. Our position has not changed in that time. For this reason, even if we did not feel that the body of the bill is unnecessary, we would have to oppose it.

Not only has our position not changed; 1080 has not changed. It remains a lethal toxicant for which there is no antidote. Its chemical stability is still one which resists breakdown and therefore can contaminate water tables. When used in a baited situation, it is non-selective and has secondary poisoning effects.

Our main objection to 1080 is one which will not change.

This toxicant causes a lingering and painful death. I quote from a study done in New Zealand in 1977 and 1978 on dogs which are physiologically quite similar to coyotes:

The effects of 1080 poisoning in the dog are heralded, 4 to 5 hours after ingestion, by continual barking and howling for a few minutes. The dog becomes overactive, and behaves as if terrified, but appears to be unaware of its surroundings. There are tonic convulsions (sustained muscle contractions) followed by running movements. Vomiting is common in field positioning cases. All clinical signs may disappear completely and the dog appear normal until it finally succumbs to the toxic effect on its CNS. Death is typically the result of respiratory paralysis. Death is never primarily cardiac in origin. The heart generally slows during the convulsive seizures but often continues beating for some time after respiration fails.

We cannot understand the fevered advocacy for 1080 use 8 years after its ban. According to the Cain report for the Council on Environmental Quality in 1971, there is great ambiguity in loss trends during the period from 1950 to 1970 when 1080 was in widespread use.

I quote:

In two of four States (Idaho and Utah), the mean annual loss in the post-1080 era (1950-70) is slightly higher than in the preceding 10 years; in Wyoming it is higher and in Colorado it is essentially the same.

I think Dr. Grandy was quoting these figures earlier.

Explanations offered by the Cain study for this ambiguity include:

(2) The true level of sheep losses to predators is so low that cutting it in half does not materially change the level of total losses; (3) The predatory and non-predatory losses are somewhat compensatory. For example, coyotes may often take sheep which would die anyway due to sickness, malnutrition, or other causes. The result is the same with or without predation loss. There is almost certainly some degree of competing probability among the various causes of loss. Obviously, some animals saved from one mortality agent will die from another.

Weighing the extremely negative properties of this toxicant against its unproven ability after 20 years of use to significantly effect losses, in our opinion, confirms Secretary Andrus' decision to reaffirm Presidential policy and to ban further 1080 research.

We have recently seen some 1978 data from the Denver Wildlife Research Center and from Alberta, Canada, on the field testing effectiveness of 1080 collars. We do feel that the results of this testing are encouraging. It appears to be an effective control method. However, we do support the necessary humane selective methods employed in conjunction with adequate husbandry techniques.

Although we may in the future consider support for a toxic collar, such support will only occur when said collar contains a humane and fast-acting toxicant, based on the inhumane death which can take up to 10 hours or more from 1080 poisoning. However, I do understand that 1080, used in a toxic collar situation, does not have secondary toxicant effects so that environmental hazard would be withdrawn. However, we do feel that the inhumane properties of the toxicant should forbid its use.

We would prefer to see field research on the use of collars containing sublethal taste aversive agents. Research with taste aversive agents in the field indicates that coyotes demonstrate learned behavior negative to sheep after aversive experiences.

We can understand the frustration a rancher with small or large holdings must feel when he loses livestock during open-range grazing periods.

However, we believe that more responsibility must be taken for sheep turned out onto open ranges. The HSUS position has always included reducing or subdividing individual herd sizes and employing shepherds and guard dogs like the Komondor to discourage predators.

We think that more oversight should occur on the range including night corralling in areas of traditionally high loss rates and lambing sheds for the ewes, and that more veterinary care should be available.

I, personally, grew up with veterinarians and have witnessed the birth of many species of sheep, both domestic and wild. Countless complications can and do occur before, during, and after birth which, if left unattended, can result in the death of both lamb and mother. Of course, during lambing the ewe and lamb are highly susceptible to predation.

Increasing amounts of data, resulting from careful predator-prey studies in the field, illustrate that the condition of the prey determines to a large extent if it is in fact preyed upon. This is a natural system of checks and balances designed, if I may use that term, to insure survival of the fittest, genetically speaking. The prey species must be either swift or strong, but above all, alert.

The sheep that are released on open Federal rangelands are the genetic result of thousands of years of selective breeding for docility. Shepherds have always been with the flocks to guard against predators night and day.

Industry spokesmen have countered any pro-shepherd arguments with the complaint that you just cannot get good help anymore. Industry-prepared cost figures for labor-intensive methods have also been used as arguments.

We believe that any sound husbandry program must include shepherds and dogs and suggest that if costs are in fact as prohibitive as ranchers say, that the possibility of a CETA training program for shepherds be explored. Of course, this suggestion could be rendered null and void by the budget balancing that is going on right now which threatens to gut most of the CETA program.

The quality of the range itself also effects losses. Overgrazing by domestic livestock and/or rodenticide programs can reduce the natural prey of coyotes, in particular, to such an extent that the only available food source is any sheep who happens to be nearby.

For this reason we agree with Secretary Andrus' decision to set up an interagency working group. Often the USDA's rodenticide program is self-defeating.

As early as 1937, the beneficial link between coyotes and rodents was recognized. Charles T. Vorhies, a range biologist, said:

* * * if rodent and rabbit control were less extensively practiced, probably predator control would be less often necessary. And, if the public could be educated to preserve hawks and owls to do their work, they, with other predators, might go far towards solving the rodent problem.

(Cain Report, 1971).

In closing, we would like to reiterate that we realize the products derived from livestock are valuable national resources and we know that in some cases there are real problems with wild predators which need to be alleviated.

We support the intent of Secretary Andrus' policy and in the future will work willingly with all affected parties in developing a program which encourages sound range management for the benefit of both indigenous wildlife populations and livestock.

Thank you.

Mr. DE LA GARZA. Thank you very much.

Mr. Wampler?

Mr. WAMPLER. Thank you, Mr. Chairman.

I want to commend you on your very fine statement and your presentation here this morning. I assume that you heard Commissioner Douglass who preceded you.

On page 4 of his statement he said:

In a document dated February 15, 1980, the Western Regional Coordinating Committee submitted a response to Secretary of the Interior Andrus' policy statement. This committee is composed of 26 of the leading predator control and research scientists in the United States. Their response is very critical of the new policy announced by Secretary Andrus. They believe it to be a political policy rather than one based on research data. They believe it will not provide adequate protection to livestock.

Are you familiar with that study?

Ms. PERKINS. No; I am not familiar with that study.

Mr. WAMPLER. That is a pretty serious allegation, is it not——

Ms. PERKINS. It certainly is.

Mr. WAMPLER [continuing]. When it comes from 26 research scientists. I do not know who they are but I would assume they are scientists who—

Ms. PERKINS. I think—if you will permit me—that one of the problems we have with this issue is that there is such a polarization of opinion. There is certainly data supporting both sides. It is a very tricky problem. I do not envy you your decisionmaking capacity here.

I think that the best way for us to try to alleviate it is for us to stop taking unbending postures and try to negotiate something for the benefit of everybody.

Mr. WAMPLER. I could not agree with you more. I hope that will be the atmosphere in which we will try to move this legislation.

I just want to say that I had no strong preconceived notions on this question when these hearings began. Some of the testimony I heard yesterday, particularly as it relates to the Andrus decision, made me feel incredulous that here was a man charged with the responsibility of making public policy at the highest level in the executive branch who went against the professionals in his own department. Apparently, his advisory committee split on their vote, which would suggest that there was a genuine division of opinion.

Ms. PERKINS. It is a very emotional issue.

Mr. WAMPLER. It leads me to believe that it was a basically political decision. Whether it is right or wrong, it is not based on sound scientific methodology and data.

Ms. PERKINS. Are you talking about the 1080 ban?

Mr. WAMPLER. Yes, primarily.

Ms. PERKINS. I do believe that that was based on scientific research that is available. As we have said, outside of the toxic collar research, the only research available are the loss rates for the years when 1080 was in use. As Dr. Grandy said and as I have reiterated, that data gives no evidence that 1080 was effective in reducing losses.

There are so many variables in losses. So many things can happen to a sheep, or goat, or cow out on the range that are not necessarily prey related. Often prey are just behaving in a scavenger's role when they are found on a carcass.

Mr. WAMPLER. I can appreciate that, the difficulty of determining from statistics what the actual cause of the death was. I can only surmise that the criticism rendered by the committee, to which Commissioner Douglas referred, does include criticism of the banning of any further research on 1080. It does not state that specifically. It relates to the total policy and that is one of its more controversial aspects.

I appreciate your expression of desire to see if we cannot find areas of agreement. That is what I am concerned about.

Ms. PERKINS. As I said, my organization would consider support for a toxic collar if it contained a toxicant which was environmentally safer than 1080 has seemed to have been and also provided a quick and humane death.

Death from 1080 is death by strangulation. The nervous system of the animal is paralyzed. It is very slow and painful.

Also, it has emetic effects which means that the animal will vomit. This can cause secondary poisoning, which could just be one side effect to the use of the 1080 collar.

I just do not understand why this toxicant is being held up as the only thing that will serve. In the last 8 years research could have been going on, on other toxicants, but it seems that the hope that this toxicant would be reauthorized has kept other research from going forward.

Mr. WAMPLER. This has been a problem, let me assure you, in the Department of Agriculture and other agencies. That is that our research budgets have been taking cuts through the years. We should be devoting more of our research resources to problems of the environment—

Ms. PERKINS. ADC got \$2 million 2 years ago from Agriculture specifically for research. It sort of evaporated into the program, which was brought out in the audit that was done by the Solicitor's Office.

Mr. WAMPLER. I am a strong advocate of increased research to see if we can find the answers and alternatives that are environmentally acceptable. I assure you that I will work in that capacity as best I know how.

I sometimes feel as though I have been a voice in the wilderness, but maybe we are getting more support now for having more meaningful research that will address these legitimate concerns that I think you and I share.

Ms. PERKINS. As you discussed before, it is really not practical to put a toxic collar on every sheep that is out there. Certainly the whole problem must be addressed of managing the sheep populations.

I think that we do not necessarily need 1,000 shepherds for 1,000 sheep.

Mr. WAMPLER. You have been a very effective and gracious witness. I appreciate your appearance.

Ms. PERKINS. Thank you very much.

Mr. DE LA GARZA. I, too, want to thank you for agreeing with me that the possible use of the collar is something on which we must do further research.

The basic problem is that you want a more toxic substance that will be instantaneously lethal. Your problem with 1980 is that it is not.

We have people on the other side who do not want an instantaneously lethal substance because it might have side effects, or be non-degradable, or whatever—

Ms. PERKINS. It would have to be a nonsecondary toxicant, but the lethal dose factor of the toxicant is meaningless if there is no antidote available. There is no antidote for 1080. Any other toxicant that might be registered and used experimentally would certainly have to have an antidote developed.

Mr. DE LA GARZA. This is where proper use in handling comes in. Its use in the toxic collar would be such that if everything else were to work right there would be no need for it.

For the positive approach you have taken and your agreement, in part, with us, we are appreciative.

Let me ask you this. Do you agree unqualifiedly with the decisions of Secretary Andrus?

Ms. PERKINS. No; I do not.

Mr. DE LA GARZA. Do you have any differences with any parts of the policy?

Ms. PERKINS. Yes. We would prefer to see preventative controls stopped. We do not think it works. It has not demonstrated that it works.

We want selective predator control.

We understand that there are problems, that there are areas, particularly in Colorado, where losses are a real problem. In those cases, selective control measures, wherein known offenders are taken, would be preferable.

Not all coyotes will go for sheep.

Mr. DE LA GARZA. That is right. We agree on that.

What is your organization's position with regard to the Secretary's decision on denning?

Ms. PERKINS. We approve of that, I think it was a good thing to do. When we are trying to work out solutions to problems, it is a good idea to defuse some of the most controversial elements of them.

Denning was a very controversial thing. It was done very cruelly. I do not know if you know how they used to perform it.

The loophole which you have been questioning, I think, says that pups could be taken if it were known that they were starving to death. That is a situation in which it is known that a lactating female is taken in a predator control situation. They would know that there were pups somewhere and would go and dispatch them.

I do not think zoos would want to take a coyote. They are not an endangered species. Zoos are not famous for their canid displays. I know quite a lot about zoos and I do not think that would be any outlet for them. I think it is probably better to humanely dispatch them.

Mr. DE LA GARZA. I do not agree with you. How can you shoot a little pup because somebody says they have no place to put them? They could at least make an effort.

Ms. PERKINS. If they could be relocated, that would be fine, but then I suppose they would also have to go through raising them. The problem with raising a canid is that it will socialize itself to humans and it will not be wild.

Also, canids have to be taught by their parents how to hunt, how to live in their environment. It would be like taking a bushman from West Africa and raising him in Chicago, then taking him back out there and saying, "OK, guy, you are on your own."

You cannot raise a canid in captivity and expect it to operate in the wild.

Mr. DE LA GARZA. It is just like taking a United Auto Worker from Detroit and trying to make a sheepherder out of him under a CETA program. [Laughter.]

It will not work.

I understand that Dr. Kun claims an antidote for 1080. Are you acquainted with that?

Ms. PERKINS. I am not acquainted with it. I thought I was up to date on 1080 research.

Mr. DE LA GARZA. Maybe you ought to brush up on Dr. Kun.

I am intrigued by the combination of majors you had—animal behavior and political science. How did you arrive at that?

Ms. PERKINS. I thought they worked rather well.

Since I was brought up with animals and traveling all over the wild kingdom, I felt that I had to formalize that experience that I had had so I took as much animal behavior as I could.

I think that in many many cases, politics and animal behavior are coincidental.

Mr. DE LA GARZA. Are you saying politicians are like animals? [Laughter.]

Ms. PERKINS. Animal behavior is a very positive thing, but a lot of negative connotations have been placed upon it.

Mr. DE LA GARZA. Often you hear that a politician is a political animal.

Are you acquainted with the Gladys Porter Zoo in Brownsville?

Ms. PERKINS. Yes. As a matter of fact, my father helped design it and I think he sits on the board of directors. I am not sure.

Mr. DE LA GARZA. That is a masterful design and one of the best zoos of that size. I regret to say that Mrs. Porter passed away recently.

That is part of my philosophy of what we are trying to do, so we are not that far apart.

Ms. PERKINS. Do you want to put some coyotes in the zoo?

Mr. DE LA GARZA. They have them.

Ms. PERKINS. That is great. I think it is important to have wolves and coyotes next to one another in a display situation, so people can see that they are really not the same.

Mr. DE LA GARZA. Find a home for those little pups that the Department of the Interior wants to shoot.

Ms. PERKINS. If you want to push that program, Mr. Chairman, I wish you luck.

Mr. DE LA GARZA. Thank you very much. We appreciate your being here.

Ms. PERKINS. Thank you very much.

Mr. DE LA GARZA. The next witness is Ms. Fran Lipscomb of the Society for Animal Protective Legislation.

We welcome you and would be very happy to hear from you at this time.

I have not seen the length of your statement, but if you would care to summarize or quote from it, without objection, your full statement will appear in the record.

STATEMENT OF FRAN LIPSCOMB, SOCIETY FOR ANIMAL PROTECTIVE LEGISLATION

Ms. LIPSCOMB. Thank you very much. That is fine.

I do want to thank you for the opportunity to testify on this occasion on Secretary Andrus' predator control policy.

I am, myself, a Texan and having grown up and gone to school in Texas, I am familiar with some of the problems that are faced in Texas and elsewhere in controlling predators. Some of my family own a ranch in south Texas. They are raising cattle there.

In preparing for this testimony, I called them, never having discussed predator control with them before, to find out what their attitude was toward the coyote and what problems they had on their ranch. I must say, I was a bit surprised but pleased to find that they

did not consider the coyote a pest. In fact, they encouraged the coyote to stay on their ranch.

They have hired a biologist to work on the ranch and one of the things that he has encouraged them to do, which has been quite successful, is to keep their coyote populations table. I spoke with the biologist. He said that one of the big problems with the coyote occurs when you have an unstable population, when you have killed too many of the animals, and there is a flux in the population. Then there is a lot of competition. You frequently get more animals coming into the area. Your problems are greatly intensified.

The biologist was from Texas and went to Texas A. & M. The experience talking to him and my family was quite a contrast to what I heard yesterday, which sounded very much as though all ranchers and sheepmen were definitely opposed to the coyote. I think that is not exactly the case.

Mr. WAMPLER. May I interrupt for just a moment? Did you say that they were in the cattle business?

Ms. LIPSCOMB. They are in the cattle business.

Mr. WAMPLER. Not sheep or goats.

Ms. LIPSCOMB. They do not have sheep or goats.

Mr. WAMPLER. I wanted to be sure I understood.

Ms. LIPSCOMB. They did say that they had had some problems with the animal damage control department. The problem centered around one particular occasion when they were having trouble with a pack of dogs that were running loose on the ranch.

They called the animal damage control program to come in to take care of the problem and the animal damage control program told them that they could not come in and take care of the dogs because the dogs were not classified as predators.

However, they could get around that if they could come onto the ranch and capture and kill all predators that they might encounter. Under that circumstance, if they encountered the dogs, they could take care of them.

Unfortunately, they encountered a bobcat prior to catching the pack of dogs.

In Secretary Andrus' new policy statement, which emphasized corrective control utilizing nonlethal noncapture methods and focusing on the offending animal to the greatest degree possible—my family and the biologist would certainly agree—is taking a step in the right direction toward correcting the problem that they had. The department did not seem quite up to handling this specific problem.

You mention frequently your enthusiasm for research. As a society, we definitely agree that research is very important in this field because there are predator control problems.

We hope that the emphasis in the research will be directed away from 1080 and into the area of birth control methods. We consider birth control much more humane than any of the available lethal methods and it does not have the effect of stimulating births, which the lethal methods often do.

It is a well-known fact that maximum sustainable yield of an animal population is usually higher when killing has brought about a response in increased birth rates. With coyotes, woolgrowers do not want more coyotes. They want fewer coyotes. By killing them, they are actually

stimulating the birth rate and getting the opposite of what their goal is.

Further, predation on livestock may be stimulated by large families of coyote pups. With research in birth control, you would reduce the number of pups and the adults would be more likely to sustain themselves on smaller prey, things that would be easier. They would not have to catch quite as many animals.

With respect to birth control, I have submitted for use by the committee a recent paper on the administration of PMHI to male coyotes. This is research that is being done by the Department. The author indicates that a single oral dose will be evaluated shortly. It is work in progress.

The second project, which is still in the grant proposal stage, that gives promise for use in female coyotes and feral dogs can be submitted. I did not bring that with me since it is a fairly thick document, but if you would like to have more information on it I can certainly provide it.

Substitution of birth control for poisons and steel traps would be a tremendous step forward. The new policy would encourage such developments if it is well and energetically administered.

To achieve such administration, the encouragement of this committee would be most valuable. It is not easy to create policy change, which is what the Secretary is trying to do, no matter how well grounded the policy is. It is not easy if the same people who are administering the old policy are now being called upon to administer a new policy. I can understand the difficulty that they are probably having.

I think it is essential that all the animal damage control personnel get behind the Secretary's decision and try to see that it works, stimulating the research into alternative areas to what has been done before but has not worked.

The so-called prophylactic killing of predators has not worked. There are some instances of animal damage control programs wherein they are making some changes. Kansas is a place where they have made changes. They send Government people in rapidly. They look at the situation and, I understand, they have been in the past acting very much in compliance with what the Secretary's decision has outlined for the future for other States.

The Fish and Wildlife Service should receive formal indoctrination and training based on the memorandum. The training should include instruction in methods of husbandry that protect livestock.

You were asking about training of herders. That seems to be something that no one is very familiar with. There is a school for herders in France.

In the July 28, 1975, issue of Newsweek there is an article entitled "Back to the Fold," which reports that at the shepherds' school in Montmorillon, there were 250 applicants this year for 50 places. I have attached the article to the back of my testimony. It does outline what herders are paid.

They are required to spend a year in the field to make sure that they are interested in getting into the work. In other words, they have to have some experience before they can even attend the school.

There was, at that time, a very avid interest. I do not think we have examined or offered this kind of training to people. It is very difficult to say that it will not work until we attempt it and see if it does.

I think with respect to herders, there is no reason to insist on the importation of foreign herders. There is a very considerable move in this country toward nontechnological life. I suspect that if an opportunity were available, if you did have a training program, even a pilot training program, you would get responses. I certainly think it would be worth research money that you have and that is at your disposal.

We hope that the sheep on the western ranges will continue to graze for centuries in the future. We do not want to see them confined, as are the hogs and veal calves of today. We believe that losses to predators can be reduced so greatly by adopting a combination of both the modern and the ancient methods.

The ancient methods would include the use of dogs, which is a program that has not received as much consideration as it needs to. There is a program going on in Hampshire College, where they are trying to use other dogs besides the Komondor. The Komondor is one that the Department of Agriculture has looked at, but there are many other herding and guard dogs that could be considered.

This research is going on in a private way but it certainly could use more research funds.

To sum up, we hope that you will urge the Department to move forward with the application of nonlethal, noncapture techniques with an emphasis on taste aversion, as has been mentioned here, and birth control; and to devote substantial resources to further research and development in these areas; to substitute the least painful methods of killing and capture where these are still being used.

Cable-coated leg snares should be substituted for steel traps and sets should be visited, at a minimum, within 24 hours. Cyanide only, among the currently known poisons, should be used. No poison which does not kill as quickly as cyanide should be used.

Better care and protection of livestock including more herders and sheep dogs, shed lambing, and provision of adequate food and water, are essential.

Yesterday, there was some discussion of the support for poison in the animal damage control program. The U.S. Fish and Wildlife Service commissioned a study called, Public Attitudes Toward Critical Wildlife and Natural Habitat Issues. It was done at Yale University. I have a copy of this study for inclusion in the record.

In the report they found that both informed and uninformed members of the general public overwhelmingly disapproved of the use of poisons as the least expensive method if animals besides coyotes might be killed. Indeed, approximately 90 percent opposed poisons to control coyotes, nearly 85 percent at a moderate to strong level.

By contrast, sheep producers and cattlemen strongly approved of poison and, in fact, constituted the only group in the entire study who favored this control strategy. Indeed, differences between the general public and livestock producers on poisoning, shooting, and trapping as coyote control options were among the greatest of any found in the study, with Chi square values at an amazingly high 965 and 778, respectively.

Even though the cattlemen and sheep producers were very high in their support of the use of poisons, I note that 25 percent of sheep producers did not support the use of poisons and 30 percent of the cattlemen did not support the use of poisons. Even though there are high percentages that did, there is still a significant part of the community that would look for other alternatives.

Thank you.

Mr. DE LA GARZA. We appreciate your being here.

Where is your family, in what county in south Texas?

Ms. LIPSCOMB. In Laredo.

Mr. DE LA GARZA. That is Webb County.

Is what they told you prevalent throughout the area? I think that is the general consensus. They want to rid themselves of the offending predator, not kill indiscriminately.

Ms. LIPSCOMB. That is right.

I think that your support for that general approach, which the Secretary has outlined in his decision, is very helpful. I would hope that there would not be need for legislation in this area, that you as the committee chairman and as a committee would be able to work with the Department of the Interior and with those who are interested in this issue to develop the most comprehensive and helpful programs to the sheepherders.

Mr. DE LA GARZA. Unfortunately, we have not been heard. That is the reason for having to introduce legislation.

The polarization was at such an extreme. Hopefully, we are trying to dissipate heat and shed some light by having these hearings.

Ms. LIPSCOMB. I think the hearings are very very useful.

Mr. DE LA GARZA. Maybe the Secretary might be more willing to accept scientific data which, we feel, he did not do. The testimony here is that he did not.

I think, even in contradiction to the Executive order, his decisions must be prudent. Someone earlier used the words "arbitrary and capricious." We certainly feel that his decision was arbitrary and capricious, but we are not going to take him to court on that. We are hopefully going to pass some legislation which is acceptable, at least in part, to all of us who agree that there is a problem and who are trying to arrive at a solution to it.

One of the ways to arrive at a solution is to have adequate research and testing and to arrive at what would be the best combination, because no one item is going to do it, not the toxic collar, not the shepherd, not the dog. We have to arrive at some combination that would be the one that would give the most protection with the least adverse effects.

Ms. LIPSCOMB. I think you are right. I think that priorities definitely have to be set on a research program. I think that it is difficult to put 1080 very high on the priority list because so much money and time has been spent on 1080 to this point with not enough information resulting that indicates that it deserves that kind of support and time, particularly in view of the fact that there are so many other areas, birth control for one, that could receive more funding and attention.

There are other methods that would meet many of the items that you are talking about. Without the pups there, you would not have them to shoot.

MR. DE LA GARZA. We are going to look at every avenue. I will tell you one personal problem that I would have in my area. If I were to advocate birth control for coyotes, they would not let me come home. [Laughter.]

Mr. Wampler?

Mr. WAMPLER. I have one brief comment, Mr. Chairman.

Ms. Lipscomb, I want to thank you for your very fine and comprehensive statement and your presentation.

I certainly agree with you, as I indicated in the colloquy with the earlier witness, Miss Perkins, that there is a need for additional research. On the other hand, if the administrators and the regulatory agencies choose to ignore what the scientific body of evidence is, for whatever reason—political or otherwise—then it does us little good to have research.

This is a question that I will address at another time in legislation that I have introduced. I intend to set up a national science council that will make these scientific determinations when they arise. Then, whatever the findings of that council are, they will be binding upon the regulators or administrators. They will have no discretion.

I still have to come to the conclusion and agree with my chairman that thus far the evidence before this subcommittee is that Secretary Andrus' decision last year was highly politically motivated and is against the substantial scientific evidence that is before us.

I just want to make that point. Just doing research alone is not adequate. We have to use it intelligently once the determination is made.

Ms. LIPSCOMB. I think, too, though that it works in reverse. It seems that there was a decision made on 1080 but basically the cattle and sheep industries continue to push the 1080 research and the 1080 poison, never giving up hope that they would get it back. I think that has skewed a lot of the research effort for the past 7 or so years.

It would have been very helpful if those research funds had been spread into other, perhaps more productive, areas. I hope that happens in the future.

Mr. WAMPLER. Let me just say that I think that there is evidence before the committee, and there will be more witnesses before this committee this afternoon, that would refute that and would say that the research on 1080 offered the greatest single hope of something constructive. Of course, reasonable persons can disagree on that, but that is the way I understand it, at least up until this point in time in the hearings.

I do not want to belabor the point. I understand what you are saying. Where you have limited research funds you ought to use them in terms of an assessment of priorities and those concepts or methodologies which do offer the greatest hope of finding an answer to a problem should be on top. At least, that is how I conceive of it.

I do thank you so much.

Ms. LIPSCOMB. Thank you.

MR. DE LA GARZA. Thank you very much. We appreciate your testimony.

[The prepared statement of Ms. Lipscomb follows:]

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SOCIETY FOR ANIMAL PROTECTIVE LEGISLATION
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STATEMENT FOR OVERSIGHT HEARINGS ON THE POLICY STATEMENT BY THE
 SECRETARY OF THE INTERIOR ON THE ANIMAL DAMAGE CONTROL PROGRAM
 BEFORE THE HOUSE AGRICULTURE SUBCOMMITTEE ON DEPARTMENT INVESTIGATIONS
 OVERSIGHT AND RESEARCH

April 17, 1980

by Fran Lipscomb

Thank you for this opportunity to testify on the new predator control policy outlined by Secretary of Interior Cecil Andrus, November 8, 1979. Over two years were spent building an exhaustive factual record on the Department of Interior's Animal Damage Control program from which Secretary Andrus developed his new policy statement, and the Society for Animal Protective Legislation opposes any legislative attempt to circumvent the process of public involvement and study which led to this new policy. We urge this Committee, instead, to encourage the successful implementation of the new policy.

As a Texan, myself, I am familiar with the predator control problems faced by ranchers and woolgrowers. Some of my family raise cattle in South Texas today, and in preparing this testimony I talked to them and found that rather than seeing the coyote as a villain to be eradicated by any means available, they encourage coyotes to remain on their land. The coyotes are a barometer of the health of the wildlife on the ranch. They feed off prey species on the land, keeping them in check, and a thin coyote is an early indicator of problems in that environment.

My family's commitment to the animals at their ranch, both the wildlife and the livestock, has been so great that they have hired a professional biologist to work there full time, and his opinions concerning predator control were very interesting.

He said that returning to the use of 1080 would be a giant step backward. It was, he said, too easy to misuse this deadly compound, and because of the secondary poisoning effect of that misuse, too many nontarget species would become the victims. He favored instead preventive approaches, such as repellants, and where persistent problems occur, the use of the M-44.

His primary complaint with the Animal Damage Control program centered around an occasion when he had problems with a pack of wild dogs on the ranch. ADC said dogs were not classified as predators, therefore, they could only help him if they could trap for all the predators on the ranch and if they happened to catch the dogs in the process, then they could get rid of them.

Unfortunately they killed a bobcat before removing the marauding pack of dogs. Secretary Andrus' new policy statement, which emphasizes "corrective control, utilizing non-lethal, non-capture methods and focusing on offending animals to the greatest degree possible," is a step in the right direction toward correcting ADC's former inability to go after offending animals only.

The ranch biologist felt a policy is clearly needed that responds to the livestock producers in reducing losses of sheep and lambs by predators, while having a minimal effect on wildlife--predator and innocent nontarget victim alike.

Upon examination of The Secretary's reforms, it is evident that they are extremely modest. Only two immediate actions were taken. He stopped all research on Compound 1080 and he stopped the practice of denning.

On the other hand the record is thick with reasons for changing the predator control policy. Large sums of money have been spent without achieving the intended results: protection of livestock.

The Department of the Interior's own internal audit in 1978 was unable to determine that the Animal Damage Control program had actually succeeded in protecting any domestic animal, though it had certainly succeeded in expending a considerable amount of money. The audit stated, "Fish and Wildlife Service cannot effectively determine whether the estimated expenditures of \$18 million in fiscal year 1978 had a significant impact on the prevention of livestock losses by predators in areas where ADC methods were utilized." (Review of the Animal Damage Control Program, U.S. Fish and Wildlife Service," November 1978)

I wish to emphasize that the Society for Animal Protective Legislation is just as interested in domestic animals as it is in wild ones. The first federal law which this Society took a leading role in passing was the Humane Slaughter Act of 1958, and we were equally active in obtaining passage of the 1978 amendments which broadened and strengthened this important statute. These laws protect livestock from cruel slaughter and handling. We are not opposed to killing animals when necessary, if it is done humanely. Predator control, as it has been carried out by the Department of Interior, however, has been extremely painful and terrifying to wildlife, and massive numbers of animals have been maimed and killed without achieving the intended result: protection of livestock. Their suffering was needless.

Under the policy outlined in the Secretary's Memorandum there will still be more suffering inflicted on wild creatures than we believe is necessary, but the total amount should be significantly reduced. We applaud the effort to move to controls which are as rational and humane as possible.

We hope the Congress, led by this distinguished Committee, will support the non-lethal, non-capture methods encouraged by the Memorandum. In particular, we urge development and use of effective birth control methods for coyotes in areas where frequent predation is reported. Birth control is clearly more humane than any of the available lethal methods, and it does not have the effect of stimulating births which lethal methods often do, compounding the problem they are intended to solve.

As is well known to wildlife biologists, the maximum sustainable yield (MSY) of an animal population is usually higher when killing has brought about a response in increased birth rates. With coyotes, however, woolgrowers are not seeking to increase the population so they can kill as many individuals as possible. On the contrary, the purpose is to keep the population low and stable.

Further, predation on livestock may be stimulated by large families of coyote pups. Without pups, adults are more likely to sustain themselves on rabbits and rodents.

It has often been observed that a resident pair of coyotes keeps out intruding new coyotes who might attack livestock. Thus, maintaining an old pair may provide important protection against other coyotes. This tendency can now be heavily reinforced by training a resident pair to stay away from sheep by means of taste aversion.

According to the Saskatchewan Department of Agriculture:

"Keep dead sheep or lambs for coyote bait. By injecting them with lithium chloride, you can keep coyotes away from your sheep all summer."

"Lithium chloride is a chemical available through Saskatchewan Agriculture. You can prepare coyote bait yourself using dead animals or remains of a coyote kill. But before you do, check with Saskatchewan Agriculture for details..."

"When your baits are ready, spread the bait near the sheep pasture. Place baits near sheep trails or just outside the pasture fence. Every three weeks replace baits coyotes have eaten."

"Lithium chloride in the bait makes coyotes violently sick to the stomach. The coyotes associate the sickness with eating the sheep, explains Dr. Jim Jowsey, Problem Wildlife Specialist with Saskatchewan Agriculture. This shifts their food preference back to rodents. Also coyotes that have learned to avoid sheep discourage other coyotes from entering the baited areas."

"From August to November coyotes roam to new areas. If your neighbour is using lithium chloride baits, watch for coyotes moving into your pastures in the fall and bait your own pasture if you have sheep..."

"One final word, if you have coyotes in the area and have never experienced predation, leave them there! These coyotes may have been averted to sheep by use of lithium chloride somewhere else in the province, or may never have preyed on sheep and not recognize them as a prey species. Such coyotes protect a territory and if allowed to remain there may keep other sheep killers out."

I would submit, with respect to predator birth control, for use by the Committee a recent paper on administration of PMHI to male coyotes. The authors indicate that a single oral dose will be evaluated following the work reported here in which the drug was injected.

A second project, which is still in the grant proposal stage, gives great promise for use in female coyotes and feral dogs. This information can be made available to the Committee if desired.

Substitution of birth control drugs for poison and steel jaw traps would be a tremendous forward step, and the new policy would encourage such developments if it is well and energetically administered. To achieve such administration, the encouragement of this Committee would be most valuable. It is not easy to create a policy change, no matter how well grounded, when the same bureaucracy, which has been accustomed for decades to pursuing a policy of attempted extermination, remains in charge of carrying out the new directives.

It is essential that all ADC personnel get behind the decision rather than attempting to undercut it. Differences of opinion aside, the fact remains that what ADC has been doing has not solved the problem. So-called "prophylactic" killing of predators has not worked. Contrast this with the killing of individual predators known to have killed lambs in Kansas. The system is well established and has proved effective even though it uses only a small number of skilled individuals. These state government men move in rapidly when a report of predation is made to them. They go to the trouble spot, show the sheep owner what to do to kill the marauder or marauders and achieve a high degree of success.

FWS personnel should receive formal indoctrination and training based on the Memorandum. This training should include instruction in methods of husbandry that protect livestock. There is a school for shepherds--and shepherdesses--in France which is so popular that a large proportion of applicants are turned away even though the courses are arduous. In the July 28, 1975 issue of Newsweek an article, "Back to the Fold," reports, "At the shepherds' school in Montmorillon...there were 250 applications this year for 50 places. The world-famous Bergerie Nationale in Rambouillet is booked solid through 1977." The entire article with more details on the shepherding school is attached to this statement for the record.

We have no such established school in the United States, but interest in the field is demonstrated by such projects as one at Hampshire College, Amherst, Massachusetts, where the New England Farm Center at Hampshire College is raising, training and distributing traditional breeds of livestock guarding dogs: the Maremma from Italy, the Shar Planinetz from Yugoslavia, and the Karabash from Turkey. Over the centuries different breeds of dogs have been developed to guard the flocks and/or to herd them.

A recent article on border collies tells of a dog named Nickey who would entice lambs to play with him. "He'd start running with 25 or 30 lambs chasing after him. Then he'd roll over on his back and the lambs would jump over him and then turn, come back and play at butting him for an hour. But when Doc gave the working whistle the frolic stopped. Nickey was on his feet with the look in his eye that the lambs knew meant the games were over and he meant business.

"The same Nickey was featured in 'Arizona Sheep Dog.' A mountain lion was used in some of the scenes, and when a scene was finished several men would maneuver him back into his cage. One evening the lion got out of control and tried to escape into the open mountain country. Doc was helping the men in their attempt to contain him when Nickey came up and put his 'eye' on the lion. This had more effect on the big cat than the men had, so they stood back and left it to Doc and Nickey to herd the animal into his cage. And it became their job to do it from that time on.

"The point Doc makes with this illustration is that the dog with friendly eyes for the playful lambs could change them to highly intensive ones to control the dangerous lion. Physically the cat had the power to kill, but it couldn't stand up to the strength of the 'eye' of this courageous little dog.

"What every shepherd hopes to find in a dog is a good combination of 'power' and 'eye'. A dog that knows no fear, that uses its eyes as enforcers and is able to communicate its courage to the stock it's tending doesn't need to use roughness; it can control them in a calm, businesslike manner."

The great intelligence of the Border Collie and the breed's remarkable skills, inborn and made more acute by training, are legendary.

Fewer of us have had the privilege of making the acquaintance of a Komondor, a big, strong dog, fierce as a lion in the protection of the flock, but so gentle with lambs that they sometimes run to the Komondor and disappear under the long curly ropes of hair that characterize the breed. When a Komondor runs toward a coyote, its great coat swinging up and down like the wings of a gigantic bird, the coyote flees with no ado.

The owners of valuable flocks of sheep have often provided these animals with minimal care and protection with the result that many die of causes other than predation. Statistics show, for example, that shed lambing is more profitable than range lambing. According to the "Draft Report on Predator Damage Management in the West," May 5, 1978, "the higher costs for labor are more than offset by the lambs marketed per ewe."

As an organization interested in the welfare of domestic animals, we respectfully urge this Committee to encourage the Department to move forward vigorously with the development of improved husbandry and dissemination of information to sheepmen on the benefits of already established practices, such as shed lambing.

With respect to herders, there is no reason to insist upon importation of foreign herders. Instead, the very considerable movement in this country to get back in touch with non-technological life should be exploited by woolgrowers and assisted with government training programs. Among the hordes of back packers who regard it as a privilege to sleep in the open, walk long distances, and carry their food with them, future American shepherds could readily be recruited who would be delighted to be paid for work in the workplace they are currently paying to reach on vacation. With greater care for the sheep by people who want to change their life style, much of the predator problem could be solved. A man or woman on the spot with a dog and a gun has no equal in protection of sheep on the range. Large bands of sheep would require more herders and more dogs.

Mr. Chairman, we hope that sheep on the western ranges will continue to graze for centuries into the future. We do not want to see them shut up in confined quarters as so many hogs and veal calves are now. We believe losses to predators can be reduced so greatly by adopting a combination of modern and ancient methods that predation will cease to be a controversial issue. To sum up, we hope you will urge the Department to move forward with application of non-lethal/non-capture techniques with emphasis on taste aversion and birth control; to devote substantial resources to further research and development in these areas; to substitute the least painful methods of killing and capture where these are still being used: cable coated leg snares should be substituted for steel traps, and sets should be visited, at a minimum, within 24 hours. Cyanide only, among currently known poisons, should be used, and no poison which does not kill as quickly as cyanide should be used. Better care and protection of livestock including more herders and sheepdogs, shed lambing, and provision of adequate food and water are essential.

Consideration of all the animals involved, herbivores and carnivores alike, combined with well directed personal effort is basic to the sheep industry's own well-being.

(Attachments to the statement are held in the subcommittee file.)

Mr. DE LA GARZA. Our next witness is Mr. Charles Howard of Meridian, Tex.

Mr. Howard, we welcome you and will be very happy to hear from you at this time. I understand you have some slides that you might want to present.

Mr. HOWARD. Yes, sir. Can you see them well enough from there?

Mr. DE LA GARZA. Yes. I think so.

STATEMENT OF CHARLES L. HOWARD, JR., CATTLE, PECAN, AND GOAT FARMER, MERIDIAN, TEX.

Mr. HOWARD. I probably will not be referring to my slides much. I will read my testimony and we will use the pictures to try to impress on people's minds the type of terrain, type of operation, the predator problem, and the toxic collar. That is how they will be used.

Dr. Dale Wade will assist me in presenting the slides.

I am certainly thankful to be here and be able, as a rancher whose livelihood depends upon what can be produced from the land, to state the problems that we are having in my part of Texas.

I have been involved in farming and ranching for 35 years. I spent my first earned dollar at the age of 7 for my first heifer calf.

We raise cattle, pecans, and Angora goats in a county in central Texas that is well suited for all. We are in a 32-inch average rainfall area.

We have raised Angora goats since 1965. We raised some sheep in 1974 but were put out of business by coyotes. We continued to raise goats because we had a few small pastures where we had little trouble with coyotes.

We leased and purchased some larger brushy places in 1973 that needed goats for brush control badly. We stocked the pastures and within a few weeks started losing goats to coyotes. I called in the county trapper and he would remove one or more coyotes. Then we would have about 6 weeks' relief.

I also went to a predator control training school and started doing some of my own work but this took too much time away from other phases of the livestock-farming operation, so we went together with a small group of other ranchers that were having similar problems and hired a full-time private trapper. He removed about 80 coyotes per year on and around our ranches.

Therefore, in October of 1978 I thought that we had the coyote population down to a point where we could run goats in our large brushy pastures. I borrowed money to bring our goat flock up to 1,100 head.

By July of 1979 we were losing one or more goats per day to coyotes and grey fox. The fox were only killing kids. This was despite the fact that we were penning at night and using all legal means available for predator control.

My wife and I went to San Angelo to a sheep and goat raisers convention in that same month.

There I learned of the toxic collar developed by Roy McBride and modified by the U.S. Fish and Wildlife Service. An announcement was made at the predator control committee meeting that test sites were needed in Texas. I agreed to cooperate.

The test began on July 23, 1979. Ten kills had been documented from the work prior to the test by Dr. Dale Wade, a wildlife specialist from Texas A. & M. University.

We had now been forced out of our large pastures into 130 acres by day and a 4-acre trap at night.

We placed 10 collared nannies and 10 kids in this pasture with 500 large wether goats and allowed them to stay out day and night. We penned all other goats at night and grazed them in fields near the barn in the daytime.

We thought the coyotes would select the smaller nannies and kids. They did on the fifth night. Two collared kids were killed and both collars punctured. We then had a brief lull in predation until August 11 when four collared kids were killed. All four collars were broken. Only one kid was fed on.

We have continued to have predation on the ranch at a very reduced rate to the point that we do not pen at night, except where we have a coyote killing from the side or rear. Predatory incidents are down from one or more per day to about two per month. We have found on this ranch that when we find coyote signs in the pastures, we will have a kill in 2 days, almost without fail.

On the second test site, 14 miles northwest of site No. 1, we put collars out after we had lost four wether goats. In the second week of the test we lost one nannie and two kids who had collars punctured. Until today we have not lost another goat and we have used no other means of control on this site.

On the third test, which involved 500 wether and billy goats on two adjoining 600 acre pastures, we lost 27 uncollared goats and 7 collared goats to coyotes. We had one or more coyotes killing from the rear.

Since we could not remove these killers with the toxic collars, we called in ADC trouble shooters and after seven coyotes were taken by traps, M-44, and calling up and shooting, we were left with one 7- or 8-year-old female who finally killed a nannie by the throat and punctured the collar. Since that time in September of 1979 we have lost only four goats to coyotes in these pastures and we do not pen at night.

At this test site we recovered three dead coyotes that had red dye on their teeth and muscle residue of 1080.

Also on this test site, when we gathered the goats to be sheared on April 1, 1980, one rider reported that he saw three red fox. This, I think, is further proof that the means we have been using since August have been very selective.

I might mention that these pastures are as much as 14 miles apart and those that advocate penning at night to control predation have no conception of the time and fuel that would be needed to do this. It would only be putting the killing off until the daytime.

Anyone who has ever tried to pen 500 goats with mohair six inches long in 100° weather from a 600-acre pasture so brushy that you cannot ride a horse through some of it knows how futile and ridiculous this method is.

I would like to mention that during the time we have been conducting the collar tests we noticed the white-tailed deer population had been greatly reduced on our ranches. Since we prefer to have a great deal of wildlife on our places and spend a great deal of planning and managing to obtain this, we were quite concerned with the low deer numbers.

We have quail, deer, wild turkey, squirrel, racoons, ringtail cat, red and grey fox, bobcats, and some other small mammals.

We documented six deer kills on about 450 acres from July 1979 until January 27, 1980—four fawns and two grown does. We examined bone marrow and condition of flesh when possible. We could find no evidence of malnutrition or disease.

The coyotes have killed so many deer in the last few years that I believe we might have to close our doe season in our county. Deer hunting brings in about \$64,000 in lease money alone to our county, not including the money spent on lodging, meals, et cetera, and the recreation afforded to the hunters.

To the right of the picture you will see a dark spot. This is a grown white-tailed doe that was killed by coyotes. That is the tush mark where it went through the upper part of the jaw.

We have recorded and examined all deaths of deer and goats from all causes and found only one case of coyotes feeding on carrion.

We have not found coyotes killing the weak, sick, crippled. Just the opposite, they killed four out of five of my registered billies and many large wethers, even when there was carrion in the pastures.

Now for the item that most are interested in—1080 in the toxic collar.

On our ranches we have found no nontarget primary hazards. We have picked up goat carcasses as soon as found and placed them under a shed so vultures would not consume them and allowed experimental dogs to feed on them each day for up to five days. Dogs showed no ill effects. They would just smell about the neck area and move back to where the coyotes had opened up the carcass to feed.

In the field vultures would clean up a goat carcass in one to two days, so they would remove the possibility of any hazards from it. Since vultures need 30 times more 1080 to kill them than coyotes do, there was no problem.

We also use our stock dogs to gather collared goats, just like we always did. We hunt our bird dogs and hounds the same way as before. We have encountered no problems.

Concerning secondary hazards, we have been unable to find any. Coyotes killed on toxic collars have either been lightly fed on by vultures or not at all. We found no other animals feeding on poisoned coyotes.

I think that we have shown that 1080 as used in the collar is the most selective, effective, humane, and environmentally safe toxicant that can be used and this continuous quoting of 1080 hazards is not supported by research. Ranchers should not be denied the safe use of it.

I also believe that according to the Kun report, we should be able to use just enough 1080 in a placement bait to kill a 40-pound coyote or whatever size we have in a certain area. We would have no secondary hazards.

We operate on all private land and I do not think anyone has a right to tell us we must pen, guard, or build certain kinds of fences to protect our livestock, until they can prove to us that these nonlethal methods work, are cost effective, and are practical. Our experience has shown that these methods only put off predation until a later time.

Ranchers in our area do all they can to protect their livestock because it is part of their livelihood and they do not like to raise livestock so it can become part of a coyote's diet so someone in Washington or some other metropolitan area can say that there are coyotes howling in Texas tonight.

I think it is time the American people wake up and come to grips with reality. Four percent of the people in this Nation are feeding the rest and are also exporting the surplus. Until we get the impression out of our minds of the Walt Disney coyotes chasing a mouse in the snow and howling at the moon and come to realize the untold millions of dollars of damage they are doing to our food and fiber supply and our other wildlife populations, ranchers are going to continue to be forced out of business. This will just increase the cost of food and fiber to the consumer.

I would like to attach "Predator Damage in the West" dated December 1978.

We are not asking for extermination of coyotes but for a realistic program of control that works and is economical.

I urge all of you to put your emotions and myths aside and get down to the facts of the damage and costs to consumers that predators are causing this great Nation of ours.

I might add, as just a small item, that coyotes cost my operation \$41,979 in loss of income in the period from October 1, 1978, until September 30, 1979. All this amount was not from actual predation loss alone. The indirect losses were worse than the direct losses—\$27,342 to \$14,637. These figures were published in Texas Agricultural Progress, on page 13, vol. 26, no. 1, Winter 1980.

I know of no other published survey that has included the indirect losses or the impact that predation has on the family rancher such as myself who is still paying debts for the low cattle prices in 1974 and 1975 and is putting a daughter through college.

Because of severe predation in our large brushy pastures we were forced into a 130-acre pasture by day and a 4-acre trap by night, then finally into 24 acres of sudan prior to the collar test. We encountered a severe parasite problem by doing this due to a wet spring and the small area occupied by so many goats. This problem led to the deaths of about 90 adult goats and we had to sell 90 head at a loss of \$40 each.

We were able to get the herd's health back to normal only by repeated drenching and moving them back to our larger pastures after we had brought predation down with the toxic collar and other methods.

Also, the goats that were penned at night sheared 0.6 of a pound less mohair on a 6-month clip at a loss of \$2.40 each. The goats were compared to two other flocks on a place 2 miles away that did not have coyote problems. We lost \$1,920 by using the nonlethal method.

Another major cost of predation to us and our State is the inability to use sheep and goats for weed and brush control for proper range management, rather than chemical or mechanical controls which are costly, labor consuming, and do not produce a product.

I would like to attach for the record photographs C, D, E, and F.

This type of range management is beneficial to deer, quail, wild turkey, and other wildlife.

I would like to submit for the record copies of "Grassland Restoration: The Texas Brush Problem" parts one through five, and "Grassland Restoration and Its Effect on Wildlife", as well as "Grass for Conservation" (farmers bulletin No. 2093) and "Effects of Predator Control on Angora Goat Survival in South Texas".

I firmly believe we need a program that will control predators so we can produce from our land.

In order to do this we must have a program that uses to the fullest extent necessary—and I would like to emphasize the word "necessary"—on our ranches we only use the amount and variety of methods that are necessary to bring a predation problem under control.

I am talking about all lethal and nonlethal methods that are effective, such as traps, M-44's, snares, aerial and ground shooting, placement baits, and the 1080 toxic collar. We must be able to create buffer zones and practice preventive controls.

The programs must have enough money to get the job done. If they are watered down to the point that they are ineffective, as the Secretary of the Interior has proposed, ranchers will pull out of the ADC programs and do their own predator control by any means or methods, legal or illegal, so that they may survive.

I believe the U.S. Fish and Wildlife Service under the Department of the Interior has shown by its actions and policy statements that it intends to do very little.

This being the case for many years, I believe the animal damage control program should be transferred to the Department of Agriculture.

Thank you.

[Photos and attachments submitted are held in the subcommittee file.]

Mr. DE LA GARZA. Thank you very much, Mr. Howard.

Mr. Wampler?

Mr. WAMPLER. I have no questions but I do want to thank Mr. Howard for his statement and his presentation. I think with the use of the slides, it has been possible for us to get a better understanding of the type of problem he was describing. It seems to be rather common in Texas and other similar areas.

I certainly want to thank him for his very comprehensive statement and his presentation.

Mr. DE LA GARZA. I would also like to thank you, Mr. Howard.

There has been some testimony that research was done in areas of high predation that did not represent the norm. Your documentation here of what was done on your land and how it affected you lets us say that there is no norm but how it affects you. I think that this will be very helpful to what we are trying to do.

Also, from the dates which you specified, your problem occurred long before this legislation was introduced, so there can be no, even remote, assumption of collusion or prepared testimony for this hearing or anything of that sort.

Mr. HOWARD. That is right. If it had not been for the toxic collar, there was only a 2-week lapse of time between my using it and quitting, I would not be up here today because we were in the process of selling out.

Mr. DE LA GARZA. That is what we are trying to prevent. I would hope that some of this morning's witnesses would have stayed for your presentation, but unfortunately, they missed it.

We thank you very much.

We will continue at 2 p.m.

[Recess taken.]

AFTERNOON SESSION

Mr. DE LA GARZA. The subcommittee will be in order.

In order to accommodate a gentleman who has a plane to catch early this afternoon, with your cooperation, I would ask Mr. John Cargile, president of the Texas and Southwestern Cattle Raisers Association to present his statement at this time. We would appreciate the indulgence of those ahead of him this afternoon. He must make a flight in order to appear at a hearing tomorrow.

Mr. Cargile, we welcome you and are happy to have you. We would appreciate hearing your statement at this time.

As with the others, without objection, your full statement will appear in the record if you see fit to either quote from it or give us a summary.

STATEMENT OF JOHN CARGILE, PRESIDENT, TEXAS AND SOUTHWESTERN CATTLE RAISERS ASSOCIATION

Mr. CARGILE. Thank you, Mr. Chairman.

I would like to express my appreciation for being allowed to testify at this time. I want also to express my appreciation to you and the other members of the committee for spending so much time considering this problem that is a devastating one to the livestock industry.

I will not read my statement in the interest of time. I have a few comments that I would like to make.

I am here today as president of the Texas and Southwestern Cattle Raisers Association, a 103-year-old livestock producers organization representing approximately 14,000 cattlemen in Texas, Oklahoma, and surrounding States.

I am also an individual livestock producer operating six combined cattle and sheep ranches in the Tom Green area and in Reagan County in west Texas. I also operate the livestock market in San Angelo. We sell about 700,000 sheep and about 300,000 cattle per year.

Therefore, I believe I understand something about the livestock industry in the State of Texas.

I was president of the Texas Sheep and Goat Raisers Association when these problems started in the early 1970's. Now, here we are 10 years later. We still have the problem. Nothing seems to have changed.

Over the years I have met with Mr. Ruckleshaus, when he was in charge of the EPA. I met with Mr. Jellinek. I met with Rogers Morton when he was Secretary of the Interior. We have testified at hearings. We have done everything we could think of to do and nearly everything that we have been asked to do. However, the situation continues to deteriorate.

Frankly, sir, it is very discouraging.

The environmental people say, "We know you have a problem. We need to find another solution to it. We want more research to look for better ways to answer your needs." We do the research and then they will not accept it.

They wanted selective control. We developed the toxic collar. Now that is not acceptable.

We have done research on 1080, concerning its continuing to kill within the chain. The scientific people say that they do not have all that big a problem with it. Now the Secretary of the Interior says that he is not going to recognize that research.

It is very similar to what we have been dealing with on the subject of 2,4,5-T. The EPA wants to withdraw the use of 2,4,5-T for brush control. They are holding hearings now on that.

The EPA appointed their own scientific advisory panel. I would assume they selected good people to evaluate 2,4,5-T. The panel came back and reported to them that they saw no potential for harm to the environment or to people from the use of 2,4,5-T. The EPA ignored the advice of their panel and have gone right on with their hearings to withdraw its use.

We keep hearing about nonlethal control methods. I do not know of any nonlethal control methods that are working today and I do not know of any of them that are practical.

These people come up here and talk. Talk is cheap. Most of them can tell you about what they heard or about what somebody told them. Very few of them have had any hands-on experience with managing domestic animals.

Anybody that does not understand that the statement made by the Secretary of the Interior, that we need to manage these domestic animals so that they do not come in contact or conflict with predators—if you do not understand how ludicrous that statement is, you just do not understand anything about domestic animals.

About one-third of the United States is grazing land. The only way you can utilize that natural resource is with domestic animals. I submit, sir, that this country is not wealthy enough for us to simply forget about using that much of our national producing ability.

In response to the Defenders of Wildlife's statement here this morning wherein they talked about cattle losses, the gentleman very clearly stated that the coyotes were not killing enough cattle to amount to anything over 550 pounds in weight. Of course, coyotes cannot kill an animal over 550 pounds.

He did not point out very clearly, however, that according to the data collected by the U.S. Fish and Wildlife Service, coyotes are killing 1.1 percent of the calves in the Southwestern part of the United States. The value of those calves today is \$32 million annually. This problem is growing.

There has been a lot said here today about the sheep and goat industry, but as the coyote population has exploded due to lack of control, in the last few years the problem of coyotes killing calves in Texas has increased substantially. The cattle industry is becoming more and more concerned about it.

In talking about the loss reports. I would like to point out that they failed to talk about the people who have been forced out of business. They say: "Well, there are a few people who are having some serious losses and some of them are losing 5, 10, or 15 percent of their animals." There is another group of people out there whose losses got up to the 50-percent level and they sold their livestock. They sold their sheep, or goats, or whatever it was and went out of business. Those losses are not reported anymore because there is no one there to report them.

There is a big volume of production out there that no longer exists because these things have happened. When he says that farm flocks do not have problems, he does not know what he is talking about. We used to sell hundreds of thousands of aged breeding ewes out of west Texas to go to the farm flock States.

When a breeding ewe in west Texas reaches about 6 years of age, she can no longer produce successfully out there in that semiarid climate. But if you will move her to a better environment where there is more feed, she has 2 or 3 more years of productive life left.

Up until a few years ago, until these predators devastated the farm flock States—from Oklahoma up to Iowa—we sold a lot of the old ewes to go up there. That market is gone. The sheep are not there any more. They are not producing any more and we are taking a smaller price for those old ewes today.

A lot of them are going to slaughter rather than having another 2 or 3 years of useful life.

Now, the gentleman said that he was not so sure that we needed the lamb and wool business, that we could buy from abroad. I submit, sir, that we can buy all the lamb meat we need. We can probably buy all the wool we need from Australia and New Zealand. If we will start buying all the beef we need, they will gear up and start selling us all the beef we need. The foreigners can sell us all the automobiles we need. Up until recently they were selling us all the oil we needed at a very reasonable price.

However, I think there is something to be learned from the oil situation about what happens to you when you become dependent on foreigners. Second, if we decide we are going to buy everything we need somewhere else, I do not know how we are going to pay for it.

I do not think there is any difference in the operation of this country from the operation of your household or mine. We cannot consume more than we produce.

If we do not produce it, we are either going to have to stop consuming it or try to get someone to lend us the money and I do not know how long they are going to lend us the money to buy things that we are not producing.

These teatime environmentalists recommend that we get plenty of sheepherders to take care of all these sheep. I do not know what their recommendation will be to take care of our cattle because we just do not handle cattle with herders.

As you well know, Mr. Chairman, cattle run over a big area of south Texas and you do not see them very often. When coyotes start killing those calves down there, a herder could not do anything about it.

In old days, up until we got into the situation we are in now, 1080 worked as a coyote population suppressant. It kept cattle losses down to the point where they were nonsignificant, but that is changing today. They are getting out of hand.

Concerning this humaneness issue, how bad it is to kill a coyote because it hurts the coyote, I submit that these domestic animals also have a nervous system. It hurts them when a coyote kills them. I do not know of any scene that, I think, is more repelling than a heifer that is having calving difficulties that has been attacked by a group of coyotes and is just eaten alive is what it amounts to.

It is a long, slow, laborious process. Coyotes can be rather vicious from the standpoint of humane treatment of other animals.

One of the prime considerations of the whole country today is inflation. There is quite a debate on about what causes inflation, but I do not think that there is much debate among the economists that one of the best answers to inflation is increased productivity. The things that are being done to agriculture, especially on this predator issue, are decreasing productivity and we cannot afford it. We need to use our domestic animals to produce to the height of our ability.

Some people idealistically would like us to have a pristine environment as we had in this country several hundred years ago. That is nice. I would like to see it too, but I do not want to live like the Indians lived when they had that environment. I think there is a tradeoff that has to be made. We have to make compromises.

I think, from a practical standpoint, you have to give more protection to the livestock industry today than we have been receiving because we are in a deteriorating situation and we have not been helped any. No improvement has been made in the last 10 years.

With that I will conclude, Mr. Chairman.

Mr. DE LA GARZA. Thank you very much.

Mr. Wampler?

Mr. WAMPLER. Mr. Cargile, I thank you very much for your statement. I appreciate it.

Let me assure you that your sentiments are generally shared by a number on this committee, and I trust, in the Congress as a whole. I think you have touched on some very fundamental questions.

The very fact that we enjoy this abundance of food and fiber today is no accident. It is the result of a long-term commitment made many years ago.

It has been said many times that the United States can compete, agriculturally speaking, with any nation in the world. This is due to a number of factors—soil, climate, but probably most important is productivity.

It has been pointed out time and time again that fewer and fewer farmers and ranchers are producing more and more food and fiber.

What has been disturbing to me has been the decline in the rate of increase of productivity in agriculture sectors, inflation, of course, being the primary culprit. However, I think needless regulations have been a major contributor to this and I tried to indicate this in a statement this morning. As we are addressing the root causes of

inflation, we are going to have to look at productivity and see why our productivity is declining in this country, while in many other industrialized societies it is on the increase.

We priced ourselves out of competitive world markets in many goods and commodities, but we are still competitive in agriculture.

I recognize and acknowledge that in a society like ours some regulation is inevitable because not everyone chooses to play by the rules of the game to adhere to the spirit of the Golden Rule, but this whole realm of needless regulation and overregulation is, I think, what the American people are rebelling against.

If I hear the message in my constituency in southwest Virginia correctly, it is not very different from what I am hearing from Texas and other great States of this Union. It is that people are getting tired of it.

I do not think that there is a person in this room that knowingly wants to do anything to harm the environment or anything that is a part of that environment, but somehow we must get a better sense of balance and reason into these equations. Otherwise, as you point out, we can turn to world markets to insure that we have what we have to have. I just wonder how much longer we can continue to do it without seeing a rather serious change in our life style in this country.

The word "opportunity" might not be as meaningful as it once was if that happened.

I would like to think that you and I are seeing generally eye to eye on the philosophical ideas, but I know you did not come here to discuss philosophy but to try to get some meaningful relief from a real problem. I just want to assure you that the chairman and I—and I know I speak for every member of this committee—want to do something meaningful but we want every person of good will to sit down and try to help us find the answers. Your testimony will be extremely helpful as we strive for those answers.

I want to thank you so much for you taking your time to come here and be with us.

Mr. CARGILE. Thank you, Congressman, I appreciate those remarks.

Mr. DE LA GARZA. Mr. Cargile, in your prepared statement or the statement from your association there is a suggested change to the bill which would give a further explanation as to the reason for the research. I do not think we will have any problem with that.

"The Secretaries of Interior and Agriculture will work jointly in the program for the protection of livestock and wildlife." That was how you worded it. I do not think the committee will have any problem with that.

We thank you very much for your presentation. It will be very helpful when we have witnesses or persons that are directly involved in the business rather than a professional who speaks for an organization.

In your stitution, we very much appreciate the fact that you speak from personal experience in addition to representing the organization.

We thank you for your contribution.

Mr. CARGILE. Thank you, Mr. Chairman. We certainly appreciate your interest.

[The proposed statement of Mr. Cargile follows:]

STATEMENT OF JOHN CARGILE, PRESIDENT,

TEXAS AND SOUTHWESTERN CATTLE RAISERS ASSOCIATION

Mr. Chairman and members of the Subcommittee, my name is John Cargile. I am here today as President of the Texas and Southwestern Cattle Raisers Association, a 103-year-old livestock producers' organization representing approximately 14,000 cattlemen in Texas, Oklahoma, and surrounding states. I am also here as an individual livestock producer operating six combined cattle and sheep ranches in Tom Green, Irion, and Reagan counties of West Texas.

I am pleased to endorse on behalf of TSCRA and myself H.R. 6725, the Animal Damage Control Act of 1980. Existing legislation is ineffective in dealing with the dramatic increase of animal predation in the livestock-producing areas of our nation.

This new legislation provides for the control of predators....and I underline control, not eradication. It will offer protection to the livestock industry from increased financial losses and does much to preserve our predator sensitive wildlife.

Before addressing the specifics of the proposed legislation, let me quickly capsule the economic impact predators and current predator control programs are having on the members of my organization. Statistical information on losses is hard to come by, but I can refer to the draft report entitled "Predator Damage Management in the West", released May 5, 1978, by the U.S. Fish and Wildlife Service. It calculates that in the Southwest region, where I reside, there are 8,381,000 calves born each year. Using the Service's minimal predation factor of 1.1%, we find that approximately 92,197 baby calves are lost to predators. On today's market, these calves have a per head value of about \$350.00. Total loss each year by animal predators...to cattle producers only...then is \$32,268,000. The predator situation, as you can see, is very serious and, quite frankly, out of hand.

The chemical compound 1080 was the main method of predator control used in our area for 20 years, but after the release of the Leopold Report in 1965, the Department of Interior changed its approach to animal damage control dramatically. Finally in 1972, without any supporting evidence, an Executive Order was issued that disarmed us... Compound 1080 was banned.

On November 8, 1979, Secretary Andrus dropped the other shoe with the issuance of his policy statement on Animal Damage Control. He asked livestock producers to accept losses of a percentage of their animals before any predatory animal control protection would be available and to implement impossible management practices that would allegedly keep livestock, which are food animals, out of the way of the free-roaming predators. The Secretary's recommendations are totally unacceptable to the livestock industry. It is my feeling that these recommendations were politically motivated rather than being based on scientific information.

We desperately need new direction in animal damage control, and we see this legislation as the way. Specifically, we wholeheartedly endorse the concept of accelerated research and the development of new chemicals effective in control, but harmless to the environment. In the interim, we ask that 1080 be returned to us until a suitable alternative is developed.

No predator control program will be effective until it extends to both public and private lands. It is absolutely necessary that a predator control program be conducted on public lands which will offer protection to both livestock and wildlife. If this is not done, federal lands will continue to be the breeding grounds from which predators reinfest control areas.

Section 2, Paragraph 4 would direct the Secretary of Interior and the Secretary of Agriculture to jointly develop and carry out a balanced ADC program which effectively utilizes both lethal and non-lethal control practices. This paragraph describes what the predator control program will encompass and how it will be conducted, but it does not say "why". The only reason for a predator control program is for the protection of livestock and wildlife. Therefore, we recommend that the words "for

the protection of livestock and wildlife" be added to Line 15, Page 2, immediately following the word "measures".

Even if this legislation is signed into law and the funds made available, it would probably take three to five years before an effective control program could be implemented to a point where livestock losses would begin to decline. By then, an additional \$90 million in losses would be incurred by livestock producers. Because of this, we recommend that additional funds be made available to implement the new program using existing control methods.

We strongly endorse the formation of an ad hoc committee with producer representation to coordinate and review any federal efforts in animal damage control. This is provided for by this legislation, and I emphasize that considerable attention should be given to fair and equal representation of all interested parties on that committee, keeping in mind that the purpose of predator control is the protection of livestock and wildlife.

Even though H. R. 6725 does not consider transfer of the ADC program, I would like to mention that it has been a long-standing policy of our Association to return animal damage control to USDA from the Department of Interior. This policy has not changed, and the blatantly biased philosophy of the Interior Department against livestock producers underscores this need.

Because of Interior's negative attitude toward predator control, losses to predators are making serious inroads in the ability of the livestock industry to produce food for our country. Economists agree that increased productivity is one of the best tools we have to combat inflation. It is in the public interest to control predators effectively so the livestock industry can do its part in producing more food for our country. H. R. 6725 provides the direction for an effective ADC program, and we urge your support for its passage.

MR. DE LA GARZA. I think probably, if it is agreeable to the next three gentleman, you might appear together as a panel and we will hear from you individually, of course.

We have Dr. Fred Knowlton, Dr. Dale Wade, and Mr. Guy Connolly. We would invite all three of you gentlemen to come to the witness table.

We would hear you in the order in which you appear on the list—Dr. Knowlton, Dr. Wade, and Mr. Connolly.

Without objection, your full statements and enclosures will appear in the record. You may proceed as you feel is amenable to you concerning the way you make your presentation.

Dr. Knowlton?

STATEMENT OF FREDERICK F. KNOWLTON, DEPARTMENT OF WILDLIFE SCIENCE, UTAH STATE UNIVERSITY; LEADER, PREDATOR ECOLOGY AND BEHAVIOR PROJECT, PREDATOR MANAGEMENT RESEARCH SECTION, U.S. FISH AND WILDLIFE SERVICE

Mr. KNOWLTON. Thank you, Mr. Chairman.

I am Fred Knowlton and I am appearing essentially as a technical witness to assist the committee. You have my full statement. I will simply try to encapsulate it by trying to establish my credentials which include 10 years of academic training and 20 years of research experience, specifically on predators and primarily on the coyote.

I was employed by the Fish and Wildlife Service in 1964 to pursue research and the understanding of coyotes. That included their biology, behavior, predator-prey relationships, and management. My professional career has been intimately tied with this research and management.

I have been most closely associated with studies of coyote abundance; population processes of reproduction, mortality, and movement; predator-prey relationships primarily involving white tail deer and coyotes in Texas and coyotes and jackrabbits in Utah and Idaho.

I have also been closely associated with some of the behavioral research dealing with the animals.

Appended to my statement are a list of my publications that are pertinent to these discussions.

Thank you.

MR. DE LA GARZA. Thank you, sir.

Your full statement, without objection, will be included in the record at this point.

We will hear Dale Wade next.

PREPARED STATEMENT OF FREDERICK F. KNOWLTON

I, Frederick F. Knowlton, am employed by the U.S. Fish and Wildlife Service as Leader of the Predator Ecology and Behavior Project within the Section of Predator Management Research. In that capacity I supervise the activities of 10 to 12 employees at two field stations administered through the Denver Wildlife Research Center as well as monitor certain contract research programs. In addition, I have an adjunct appointment to the faculty of Utah State University in the Department of Wildlife Science.

My background includes a rural upbringing and ten years of academic training in wildlife science and related fields culminating in degrees awarded by Cornell University, Montana State College, and Purdue University. I first became involved with research on coyotes in 1960 during my graduate program and was

employed by the U.S. Fish and Wildlife Service in 1964 specifically to pursue further research and understanding of coyotes; their biology, behavior, role in the environment, and management.

My professional career has been intimately tied to research and management of coyotes. The research with which I have been most closely associated includes studies of coyote abundance and population processes (reproduction, mortality, and movements), predator-prey interactions with emphasis on coyote-deer relationships in Texas and coyote-jackrabbit interactions in Utah and Idaho, as well as coyote behavior. I have also been involved with the design and execution of studies related to assessing the importance of depredations by coyotes and developing means of alleviating such losses. This includes exposure and/or experience with nearly all of the techniques employed by the operational Animal Damage Control Program as well as the administration of that program.

Appended is a list of pertinent reports and publications authored or coauthored by me in this regard.

SELECTED PUBLICATIONS OF FREDERICK F. KNOWLTON

- 1964 (with E. D. Michael and W. C. Glazener) A marking technique for field recognition of individual turkeys and deer. *J. Wildl. Mgmt.* 28(1): 167-170.
- 1964 Aspects of coyote predation in South Texas with special reference to white-tailed deer. Ph.D. Dissertation, Purdue University, Lafayette, Indiana. 139 pp.
- 1967 (with S. B. Linhart) Determining age of coyotes by tooth-cementum layers. *J. Wildl. Mgmt.* 31(2):363-365.
- 1968 (with D. O. Trainer and L. Karstad) Oral papillomatosis in the Coyote. *Bull. Wildl. Disease Assoc.* 4(2) 52-54.
- 1968 Coyote predation as a factor in management of antelope in fenced pastures. Proc. 34rd. Biem. Antelope States Workshop. Casper, Wyoming.
- 1968 (with P. E. Martin and J. C. Haug) A telemetric monitor for determining animal activity. *J. Wildl. Mgmt.* 32(4):943-948.
- 1968 (with D. O. Trainer) Serologic evidence of diseases in Texas coyotes. *J. Wildl. Mgmt.* 32(4):981-933.
- 1971 (with J. W. Little, J. P. Smith and R. R. Bell) Incidence of some nematodes in Texas bobcats. *Texas J. Sci.* 22(4):403-407.
- 1972 Preliminary interpretations of coyote population mechanics with some management implications. *J. Wildl. Mgmt.* 36(2) 369-382.
- 1973 The chaotic coyote controversy: A challenge joined. Western Association of State Game and Fish commissioners, Salt Lake City, Utah.
- 1975 (with S. B. Linhart) Determining the relative abundance of coyotes by scent station lines. *Wildl. Soc. Bull.* 3(3):119-124.
- 1976 Potential influence of coyotes on mule deer populations. In Mule Deer Decline in the West: A Symposium. (Eds. G. W. Workman and J. B. Low) Utah State Univ. Agric. Expt. Sta., Bull., pp. 111-118.
- 1979 (with W. M. Tzilkowski) Man-caused mortality of coyotes radio-marked in Grand Teton National Park. In Proc. First Conf. on Sci. Res. in the Nat. Parks, R. M. Linn (Ed.), pp. 319-321.
- 1979 (with L. F. Ruggiero and C. D. Cheney) Interacting prey characteristic effects on kestrel predatory behavior. *The Amer. Naturalist* 113(5) 749-759.
- 1980 (with M. White and J. G. Kie) Weight patterns of wild white-tailed deer in southern Texas. In Proc. First Welder Wildlife Symposium, L. Drawe (Ed.), Allen Press, Lawrence, Kansas, pp. 55-64. (in press)
- 1980 (with J. B. Kie and M. White) Effects of coyote predation on population dynamics of white-tailed deer. In Proc. First Welder Wildlife Foundation Symposium, L. Drawe (Ed.), Allen Press, Lawrence, Kansas, pp. 65-82. (in press)
- (with E. A. Gluesing and D. F. Ralph) Behavioral patterns of domestic sheep and their relationship to coyote predation. *Applied Animal Ethology*. (in press, accepted 11/79)
- (with L. C. Stoddart) Coyote population mechanics: Another look. In Symposium on Natural Regulation of Wildlife Populations. Academic Press. (in press)
- (with W. M. Tzilkowski) Trends in bobcat visitations to scent-station survey lines in Western United States, 1972-1978. In Proc. Bobcat Research Conf. Front Royal, Virginia. (in press)

STATEMENT OF DALE A. WADE, EXTENSION WILDLIFE SPECIALIST,
TEXAS AGRICULTURAL EXTENSION SERVICE, TEXAS A & M UNIVER-
SITY SYSTEM

Mr. Chairman and Members of the Committee, my name is Dale A. Wade. I am Extension Wildlife Specialist, Texas Agricultural Extension Service, Texas A&M University System, at the Texas A&M Research and Extension Center, San Angelo, Texas.

I am the current chairman of the Western Regional Coordinating Committee for Management of Predators in Relation to Domestic Animals (WRCC-26), whose membership represents the majority of scientists involved in predator-related research in the western United States. Membership of this committee varies slightly from year to year; at present there are 28 members. Among their areas of specialization are animal science, range science, veterinary science, chemistry, biochemistry, economics, zoology, ecology, and wildlife. Other cooperating scientists include additional disciplines.

Mr. Chairman, it has been requested by WRCC-26 membership that I summarize for your committee the WRCC-26 findings regarding the U.S. Department of Interior Animal Damage Control policy statement of November 8, 1979, and the role of Extension in predator damage control. These are more fully described in Appendices A, B, C, and D. Appendices E and F provide a summary history of predator damage control operations and research programs.

Mr. Chairman, the WRCC-26 Committee would like to emphasize the following points from our analysis of the USDI-ADC policy. The analysis was prepared by an ad hoc committee of WRCC-26 and was reviewed by the entire committee.

WRCC-26 Analysis of the
USDI-ADC Policy Statement of November 8, 1979

General Comments

The public deserves an objective evaluation of the facts surrounding the issue of predator damage control and a sound ADC policy must be based on these facts.

The WRCC-26 Committee recognizes that even with currently available damage control methods and programs depredation on

livestock in the Western United States causes serious economic loss to many producers and forces abandonment of a substantial number of livestock operations.

These losses reach levels which prevent proper livestock use of rangelands and other forage resources. As a consequence, there is a continuing irreversible conversion of agricultural land to nonagricultural uses.

In addition, depredation problems cause acute but often unrecognized social and cultural impacts on rural families and communities and decrease the quality of rural life.

These factors emphasize the need for a national policy which recognizes and clarifies the importance of livestock grazing for production of food and fiber. If grazing is a desirable use of public lands as a part of this national policy it should be given appropriate priority. The WRCC-26 Committee supports and endorses grazing of public lands as appropriate under the multiple use, sustained yield concept.

The policy statement emphasizes "the importance of predators to natural ecosystems". However with rare exceptions, which do not occur where livestock are produced, natural ecosystems do not exist in the United States. Moreover a majority of livestock and wildlife are produced on private lands and many of the more serious depredation problems also occur on private lands.

We recognize and support the need to preserve wildlife. We also recognize the need to protect and preserve all components of the livestock industry from excessive losses to predators. The best use and preservation of range resources can only be accomplished with a mix of livestock classes.

We support the need for a professional ADC program as the most selective, effective and sound approach. However, implementation of the new USDI-ADC policy will not provide the same level of livestock protection.

Collectively the WRCC-26 Committee is familiar with all lethal and nonlethal methods of predator damage control. We do not support the premise that the emphasis on nonlethal methods in the new policy will provide adequate protection of livestock.

We are concerned that the new USDI policy ignores recommendations of ADC research scientists and professionals in ADC operations and that it has no logical relationship to the recent study of predator damage in the West to the related environmental impact analysis or to established scientific facts.

We believe that implementation of the policy should be contingent upon demonstration and evidence that it does prevent predator damage at least as effectively as the current program.

We further believe that to evaluate its effectiveness the USDI should conduct a series of responsible demonstrations prior to implementation. If this is not acceptable, the policy should be abandoned in favor of one based on established fact and competent professional judgement. If neither of these alternatives is acceptable, we suggest that the USDI is incapable of conducting wildlife preservation and animal damage control functions with equal concern for each and we recommend that ADC research and operations be removed from USDI to an agency that is competent to deal with depredation problems.

Comments on Policy

The WRCC-26 Committee does not support the limitation of preventative controls, phasing out of lethal controls, and deletion of buffer zones.

We do not accept or support the premise that nonlethal noncapture methods focusing only on offending animals will provide adequate livestock protection.

Livestock husbandry methods have limited application for protection of livestock, particularly on range operations.

Information on husbandry and damage control methods must be based on sound research and demonstrated application to local damage situations.

We support deployment of resources to locations and seasons of greatest need.

Comments on Policy Restrictions on Operational Techniques

Denning is an economically efficient and selective damage reduction method and is essential in many cases. We oppose the restriction of denning.

Aerial hunting is closely regulated by federal and state laws and regulations. It is far more costly and hazardous than is the use of chemical toxicants but has become an essential method. Since the ADC program is conducted on only 11 percent of the land area in the western United States and aerial hunting and denning on only a portion of that 11 percent we see no legal or biological justification for further restriction of these tools. We oppose these further restrictions.

We support continued use of traps as an essential method of damage control and the use of attractants as a means to increase their effectiveness and selectivity.

We strongly oppose restrictions on further research and development of Compound 1080 for use in damage control. We also question the sincerity of the USDI commitment to permit development and use of chemical controls since the 1080 toxic collar, a highly selective and effective method, has been prohibited for use by USDI personnel just as it has reached the stage of practical application.

We support the need for additional research into the use of toxic baits, including the use of 1080, for use where predation is severe due to excessive coyote populations.

Comments on Program Operations Directives

We oppose the setting of management objectives and revision of field operations to support the listed goals and objectives.

We do not support the concept that another interagency committee will contribute significantly to resolution of depredation problems on public lands unless it occurs through prohibition of livestock use of public lands.

We question the proposed membership of the interagency working group; no representation is suggested for state, county or local agencies, or for the affected industry, all of which contribute funds to the program.

Comments on Research Directives

We seriously question the premise that a five-year research program will result in practical and effective nonlethal methods of predation control. Research results over the past decade do not lend credibility to this assumption.

There are practical limits to the application of husbandry methods. Many are not acceptable in sound range and livestock management and some are prohibited by public land policies and regulations.

We do not agree with the euphoric support of lithium chloride to reduce predation. The best available information does not support the premise that it is effective.

The assumption that species specific toxicants are currently known is in error; they have yet to be found and developed. At present there is no known compound which is as safe and selective and has such a significant research base as Compound 1080. Termination of research on development and use of Compound 1080 as it reaches the operational stage in the toxic collar has no basis in biology, economics, or logic and thus is discouraging to research and operations personnel and to livestock producers.

We believe that if a research advisory committee is formed competence and knowledge in the ADC field should be essential to membership. We suggest that competent ADC research and operations staff be appointed to the committee. We also request that WRCC-26 be authorized to select one of its members to serve on the committee if it is formed.

The WRCC-26 Committee supports the need for continued research on documentation of losses, nonlethal methods, and testing under a variety of seasonal, geographic and ranching conditions. We also strongly support the need for continued research on Chemical toxicants, including Compound 1080.

Comments on Budget

Application of the policy statement directives to research and operations will require additional time, effort and costs and will lead to an increase in livestock losses. Thus, the statement that "this level of funding . . . will provide at least the same level of livestock protection" is naive and false since the restrictions imposed will be additive to all others existing.

Summary WRCC-26 Comments on Cooperative Extension in Predator Damage Control

The Extension role in predator damage control is to provide information through an educational system; Extension is not a control method or program. Extension does not have the manpower, capability or funds to replace operational programs or to conduct direct control operations.

Extension can only extend information which is based on sound research and demonstrated application to local situation. Application must also be feasible for each farm or ranch on which it is proposed.

Extension of information is effective and useful only if practical methods to solve a problem exist and can be employed.

Effective damage control requires the availability of all useful methods and flexibility in choosing and applying those most suitable to each case where control is needed. No single method is consistently useful in solving depredation problems.

Providing information may not be effective if individuals do not have the resources or extensive training required to deal with wary, intelligent, or wide-ranging animals. Trap-shy animals, mountain lions, and bears are examples.

Some damage control methods require highly competent professionals for safe and effective application.

Extension of information may be ineffective on arid rangelands where extremely large operating units are required due to low carrying capacities for livestock. Similar situations may occur on migratory livestock operations and on public lands.

Therefore, Extension can provide assistance to producers in reducing depredation losses but this must be accompanied by an effective operational program in many loss situations.

Mr. Chairman, this concludes my summary comments for the Western Regional Coordinating Committee. At the request of WRCC-26 membership I submit the following listed documents for the record of this hearing:

- A. Western Regional Coordinating Committee, WRCC-26. 1980. Predation on Domestic Animals: A Response to Secretary of Interior Andrus' Policy Statement to the Animal Damage Control Program, Utah Agricultural Experiment Station, Utah State University, Logan, Utah. 91 p.p..
- B. Wade, D. A., O. T. Sanders, J. E. Miller, G. C. Halazon, and M. J. Caroline. 1977. Vertebrate Animal Damage Control, Summary of panel discussion and committee review, National Extension Wildlife and Fisheries Workshop, April 26-28, 1977, San Antonio, Texas, Proceedings: Fourth Great Plains Wildlife Damage Control Workshop, December 4-6, 1979, Kansas State University, Manhattan, Kansas. (in press).
- C. Wade, D. A. Extension Program Planning for Predator Damage Control, Proceedings: Fourth Great Plains Wildlife Damage Control Workshop, December 4-6, 1979, Kansas State University, Manhattan, Kansas. (in press).
- D. Responses of Cooperative Extension State Directors to the USDI-ADC policy statement of November 8, 1979, USDA-SEA Extension Natural Resources. April 8, 1980.
- E. Wade, D. A. and S. L. Beason. 1979. The Effects of Environmental-Political Factors on Predator Research, Vertebrate Pest Control and Management Materials, ASTM STP 680, J. R. Beck, Ed. American Society for Testing and Materials, p.p. 294-303.
- F. Wade, D. A. 1980. Predator Damage Control, 1980: Recent History and Current Status, Proceedings: Ninth Vertebrate Pest Conference, March 4-6, 1980, Fresno, California. (in press).

(The attachments to the statement are held in the subcommittee file.)

Mr. DE LA GARZA. Thank you, Dr. Wade.
Mr. Connolly?

STATEMENT OF GUY E. CONNOLLY, WILDLIFE BIOLOGIST, TWIN FALLS, IDAHO, RESEARCH STATION, DENVER WILDLIFE RESEARCH CENTER, U.S. FISH AND WILDLIFE SERVICE

Mr. CONNOLLY. My name is Guy Connolly. I am a certified wildlife biologist with a bachelor's degree in wildlife and range conservation from the University of Montana and a master's degree in biology from California State University, Sonoma.

Since April 1975 I have been engaged in research on coyote predation control at the Twin Falls, Idaho, field station of the section on Predator Management Research, Denver Wildlife Research Center, U.S. Fish and Wildlife Service.

In this capacity, I am the principal investigator for research and development of the toxic collar which is a new technique for using toxicants selectively to kill only coyotes that attack livestock. This assignment involves the planning and direction of field tests, as well as supervision of pen trials of improved collars, new toxicant formulations, and nontarget poisoning hazards using captive animals.

I prepared the application for the EPA experimental use permit under which the Fish and Wildlife Service has been using Compound 1080 in the toxic collar since 1977. To the best of my knowledge, I am the only U.S. Fish and Wildlife Service biologist in many years to carry out field studies on the efficacy or environmental hazards of Compound 1080 as a predacide. All of my work on 1080 has been related to its use in the toxic collar.

In my current position, I also supervise research on aversive agents such as lithium chloride. I participated in drafting the U.S. Department of the Interior study on Predator Damage in the West, released in December 1978, and in preparation of USDA's Final Environmental Impact Statement on Mammalian Predator Damage Management for Livestock Protection in the Western United States, released in June 1979.

I have written comprehensive reviews of predation and predator control in the management of big game in North America and on coyote population dynamics as influenced by predator control.

Before taking my present post with the Denver Wildlife Research Center in 1975, I worked 12 and one-half years for the University of California, Davis, as a staff research associate in studies related to the ecology and management of big game—that was from 1962 to 1975—and predators—from 1972 to 1975. My research experience there included studies of sheep killing behavior of coyotes and simulation modeling of coyote population dynamics.

My research experience in the area of predator management is further described in the attached bibliography.

Gentlemen, I wish you to understand that you are looking at a very rare species of individual. You have heard a lot of talk about research and the need for research on predators and predator damage and predator damage management.

There are extremely few people in the United States who are actually engaged in such research. You are looking at two of them in the forms of Dr. Wade and myself. I think if you were to count all of the people engaged in such work in the United States, you could use the fingers of both your hands—if you have 10 fingers.

At the request of this subcommittee, I am pleased to appear at this hearing to answer any questions you may have on biological or technical aspects of predator management.

Thank you.

Mr. DE LA GARZA. Without objection, the material you have submitted will be included in the record at this point.

[The article "Coyote Predation on a Texas Goat Ranch" is held in the subcommittee file. The second attachment follows:]

Guy E. Connolly--WRITINGS PERTINENT TO PREDATOR MANAGEMENT AND BIOLOGY

THE EFFECTS OF CONTROL ON COYOTE POPULATION DYNAMICS, by G. E. Connolly and W. M. Longhurst. University of California, Division of Agricultural Sciences, Bulletin 1872. 37p. 1975.

PREY REMAINS AT A GOLDEN EAGLE NEST NEAR HOPLAND, CALIFORNIA, by G. E. Connolly, M.E. Fry, and J. Fammatre. Calif. Fish & Game 62:85-86. 1976.

SHEEP-KILLING BEHAVIOR OF CAPTIVE COYOTES, by G. E. Connolly, R.M. Timm, W.E. Howard, and W.M. Longhurst. J. Wildlife Management 40:400-407. 1976.

HOW COYOTES KILL SHEEP, by R. M. Timm and G. E. Connolly. Rangeman's Journal 4:106-107. 1977. (REPUBLISHED by the National Woolgrower 70(1):14-15, 1980, and elsewhere.)

THE VALUE OF POPULATION DYNAMICS MODELS IN COYOTE MANAGEMENT, by G. E. Connolly. Trans. Western Assn. State Game and Fish Commissioners 57:93-103. 1977.

PREDATOR CONTROL AND COYOTE POPULATIONS: A REVIEW OF SIMULATION MODELS, by G. E. Connolly. Chapter 14 In: Bekoff, M. (Ed.). Coyotes: Biology, Behavior, and Management. Academic Press, New York. 384p. 1978.

COYOTES, SHEEP AND LITHIUM CHLORIDE, by R. E. Griffiths, Jr., G. E. Connolly, R. J. Burns, and R. T. Sterner. Proc. Vertebrate Pest Conference 8:190-196. 1978.

TOXIC COLLAR FOR CONTROL OF SHEEP-KILLING COYOTES: A PROGRESS REPORT, by G. E. Connolly, R. E. Griffiths, Jr., and P. J. Savarie. Proc. Vertebrate Pest Conference 8:197-205. 1978.

PREDATORS AND PREDATOR CONTROL IN BIG GAME MANAGEMENT, by G. E. Connolly. Chapter 24 In: Schmidt J. L. and D. L. Gilbert. (Eds.) Big Game of North America: Ecology and Management. The Wildlife Management Institute, Washington, D. C. 512p. 1978.

COYOTE PREDATION ON A TEXAS GOAT RANCH, by D. A. Wade and G. E. Connolly. Texas Agricultural Progress 26(1):12-16. 1980.

LITHIUM CHLORIDE BAIT AVERSION DID NOT INFLUENCE PREY KILLING BY COYOTES, by R. J. Burns and G. E. Connolly. Proc. Vertebrate Pest Conference 9 (In press) 1980.

Twin Falls, Idaho
April 1980

Mr. DE LA GARZA. Mr. Wampler?

Mr. WAMPLER. Thank you, Mr. Chairman.

I want to express my appreciation to each of you gentlemen for your appearance here and for your statements and submissions for the record of the documents you brought with you. I thank the gentleman from Texas and I would take judicial notice of your credentials.

I think it is unique when we have at least two individuals here who are generally regarded as experts in this field, a field in which apparently there is a good deal of confusion and conflicting data and honest differences of opinion.

This morning Commissioner Douglass from West Virginia, in stating the position of the National Association of State Departments of Agriculture, commented on the response to Secretary of the Interior Andrus' policy statement. In doing so he said that the Western Regional Coordinating Committee "is a committee composed of 26 of the leading predator control and research scientists in the United States." That would be a fair description of the committee, would it not be?

Mr. WADE. Yes, Congressman Wampler, it would be.

Mr. WAMPLER. In this regard, Dr. Wade, I wanted to ask you this. Prior to the cancellation of the compound 1080 as the result of the Executive order in 1972, about how much of this toxicant was being used in the United States? Do you have some idea how much of it was being used in the various States?

Mr. WADE. I think as an approximation of use in the Western United States, west of the one-hundredth meridian, it would be of the order of 23 to 24 pounds annually. I do not know how it could be divided by State.

I believe that Wyoming used of the order of a pound annually; the State of Texas, I think, of the order of a pound and one-half to a pound and three-quarters per year.

Mr. WAMPLER. In other words, it would be fair to say that it was used rather sparingly, would it not be?

Mr. WADE. Yes. I would certainly say that.

Mr. WAMPLER. Let me ask you this. Recommendations have been made that we continue to use the facilities of the extension service for ranchers who might find improved husbandry practices or other methods of controlling practices. Do you feel this would be an effective way of doing it, or is this the function of extension?

Mr. WADE. Yes, Mr. Wampler, it is a function of extension to a degree. I would perhaps recall to your memory the comments made by Dr. Bouns yesterday. That is, there is a need, without question, for an integrated approach using the nonlethal methods including animal husbandry, fencing where possible, and others--whatever is appropriate to the terrain, vegetation, and geography--and lethal methods to remove those animals which are causing serious economic problems.

As I pointed out in the summary comments, extension is an educational method and we can only extend information which is useful and effective in terms of service to the constituents to which we are responsible. For that approach to be effective we have to have practically applicable methods.

Many of the people with whom I have contact in the livestock industry are applying those to the limits of their ability in terms of economic and biological possibilities. It is questionable in many cases whether additional information extended to them will be particularly useful.

Mr. Howard, for example, pointed out this morning the difficulty of penning goats at night in hot weather from extremely heavy brushy pastures. We have had direct personal experience with that. I gained my first education of any sort with goats during the past year on Mr. Howard's ranch and I can attest to the difficulty of carrying out that kind of an operation.

It is simply, completely impractical, as Mr. Howard pointed out.

There are many circumstances which limit the application of husbandry methods. Mr. Howard is one who is applying everything within his power in the nonlethal methods of control, without a great deal of success at the time we began the toxic collar tests.

Mr. WAMPLER. Dr. Wade, has Texas A. & M. University made application for research funds to work on compound 1080 to any Federal agency, that is to say, EPA, or USDA, or USDI?

Mr. WADE. There has been application in the past. Dr. Samuel Beasson submitted a request for experimental use of 1080 in small placed baits. I believe at that time he submitted a budget but I do not recall the amount to EPA in the hope of having it funded. Both the request for experimental use and the budget were denied.

Mr. WAMPLER. Mr. Chairman, I believe that is all I have for now.

Mr. DE LA GARZA. Mr. Connolly, since you and Dr. Wade have done a tremendous amount of work on the toxic collar, it just dawned on me that we have been mentioning the collar throughout the hearings and no one has described it verbally for the record. Could you do that for us? Could you give us a description of the collar, how it is applied on the animal, and the reasoning behind where it is applied—a verbal description if you can, sir?

Mr. CONNOLLY. I would be pleased to do so, Mr. Chairman. The toxic collar is the most effective practical method known to selectively kill coyotes that attack sheep or goats. I happen to have a collar with me which I will pass up for your inspection.

[Toxic collar is shown to the subcommittee.]

Mr. CONNOLLY. The toxic collar exploits the coyotes normal habit of killing with bites to the neck or throat of a sheep or goat.

I will also submit to you a photograph of a coyote killing a collared lamb.

Coyotes that attack collared sheep or goats usually puncture the collar with their teeth, and in so doing receive a lethal oral dose of the toxicant. Since poison is released only when the collar is punctured, the toxic collar affects only those coyotes that prey on livestock and toxicant is exposed only when predation occurs or on those infrequent occasions when a puncture is accidentally torn on barbed wire, let us say, or prickly pear.

For these reasons, the method offers a significant technical advance that permits ranchers and predator control workers to deal specifically and selectively with the individual coyotes that are responsible for damage.

In addition, the collar appears to take some problem individuals that have escaped capture by other methods.

I must, in all fairness, point out that the known disadvantages of the collar include the need for sacrificial lambs or kids; any potential safety or environmental hazards posed by the use and occasional loss of collars; and the labor and expense involved in collaring livestock, monitoring collars, and managing livestock so as to direct predation to the collared animals while at the same time protecting the uncollared animals on the farm.

In addition, the collar is ineffective against coyotes that attack livestock at any body site other than the neck. At Mr. Howard's ranch we have had approximately 10 goats killed in some manner other than by biting the neck. Of course, the collar was ineffective against those.

Like all techniques for reducing coyote predation, the toxic collar is more suited for application in some situations than others. We have not yet done sufficient research to establish the limits of its practical application.

Is that sufficient?

Mr. DE LA GARZA. I guess I could probably add that it is attached on the collar of the animal—

Mr. CONNOLLY. It is attached around the neck of the sheep or goat by means of Velcro neck straps. The model of collar that we have used most contains 30 cubic centimeters or 30 milliliters of toxicant. I might add that in all of our field research with the toxic collar from the beginning in 1978, we have used approximately 1 ounce of 1080.

Mr. DE LA GARZA. Mr. Connolly, did you say 30 cubic centimeters of 1080? If that amount were ingested by a human, what would be the effect if the person were of normal size?

Mr. CONNOLLY. It would contain on the order of between two and seven human lethal doses. There would be no effects for a short time during which administration of an emetic would save the person's life.

We do not know how long this time period is. Should a person ingest the entire or even half the contents of the collar, it would undoubtedly kill him or her.

The likelihood of that occurring under conditions of operational use is extremely remote as these collars become rather unattractive after they have been on a sheep or goat awhile. You would not pick one up off the ground and put it in your mouth I do not think.

Mr. DE LA GARZA. That was my second question. We have on the record what that amount of 1080 that is in the collar would do with respect to a human and what the possibility would be of a human getting a collar and taking all 30 cubic centimeters out of the collar as it appears. You already testified that it would be a very remote possibility.

Mr. CONNOLLY. I think that the prospect of that occurring is so remote that it need not even be considered.

I might point out that in 25 years or more of widespread use in the West of compound 1080 as a predacide, by the Fish and Wildlife Service, there was never a human fatality in connection with that use.

Mr. DE LA GARZA. Does the 1080 compound, or what would be used in a collar, have injurious properties to a human if it is not ingested, for instance, if one touched it or if a little drop got onto your hand? Would it have any effect that way?

Mr. CONNOLLY. It would have no detectable effect, sir. You would, of course, wash the material off your hands probably without undue delay. I have, myself, been accidentally exposed to the liquid, just in the course of loading the collars, without ill effects.

Mr. DE LA GARZA. So, your expert testimony is that the possibility is so remote that it does not even deserve mention here that any human could ingest the whole contents of a collar or become somehow injured by superficial contact with the contents.

Mr. CONNOLLY. I do not think that that is a substantial risk, sir.

A person could deliberately commit suicide with it, of course.

Mr. DE LA GARZA. I do not think they would walk out into a range and go looking for a toxic collar to do that. [Laughter.]

Even that would be a remote possibility.

Can you give us a little background or the scientific breakdown on 1080? What is it? What does it do? How long does it stay if it spills on the ground? Could you get into that a little bit?

Mr. CONNOLLY. Yes, sir. I would be happy to do so.

Compound 1080, by the way, is the registered trade name of Tull Chemical Co., one of the U.S. manufacturers of it. It is also known as sodium flouroacetate and DRC 4008.

Compound 1080, or sodium monofluoroacetate, is a synthetically made sodium salt of monofluoroacetic acid, which occurs in nature as the toxic principle in many poisonous plants. Most of the plants occur in Africa or Australia. None have been found in North America.

The use of 1080 against vertebrate pests began during World War II. Most of the research on compound 1080 as a predicide in the United States was carried out by the Denver Wildlife Research Center in the late 1940's and early 1950's.

There are several publications of record on the research by Weldon Robinson from 1948 through 1953.

Even though the toxicant was used by the Fish and Wildlife Service to control predators for about 25 years, virtually no research on the effects of such use, either on the target or nontarget species, was carried out during most of this period.

Since February 1962, when President Nixon issued the Executive order prohibiting the use of predacides by Federal agencies, the Fish and Wildlife Service has not used compound 1080 either in control operations or research other than in the toxic collar.

I might mention that in the years immediately preceding the Presidential ban there were some 2,100 to 2,200 pounds of compound 1080 being sold by the two U.S. manufacturers. About 1 percent of this material was used in predator control. The other 99 percent was used in rodent control, both for urban and commensal rodents and field rodents.

It is a matter of some interest, I suppose, that the 1 percent used on predators seems to generate more controversy than the 99 percent that was used on rodents.

I might point out that even though compound 1080 as used as an economic poison in the United States has declined over the past 20 years or more, the toxicant is widely used elsewhere in the world and is the subject of substantial research elsewhere in the world.

For example, in New Zealand, a country about two-thirds the size of California, some 4,400 pounds of compound 1080 are used annually against rabbits and brush tailed opossums. This compare with some

22 to 25 pounds being used in predator control in the United States immediately prior to the Executive order, as Dr. Wade testified earlier.

The toxicant is also of major importance in western Australia, where some 5 million drop baits are used each year against the dingo, a wild dog that preys on sheep over there.

Of especial interest in western Australia is the fact that mono-fluoroacetic acid, the naturally occurring form of 1080, is a poisonous principle in over 30 species of native legumes which are palatable to livestock and cause substantial livestock losses through poisoning in western Australia.

Consequently, that aspect of 1080 poisoning is a subject of considerable research there and the ability of animals to consume and detoxify fluoroacetate is under investigation there.

Native animals that have a high exposure to these toxic plants have been found to exhibit an unusually high tolerance to 1080 compared with the same species residing in other regions of Australia where these toxic plants are absent or rare. The resistant animals have been shown to be capable, just within the last couple of years, of detoxifying fluoroacetate by defluorination.

If this seems unduly technical, let me assure you that this phenomenon is most significant in relation to the possible development of an antidote or treatment for fluoroacetate poisoning, which is a subject under intensive investigation right now in western Australia.

In these hearings we have heard from time to time of Dr. Kun. I must mention here that Dr. Kun is responsible for a very significant basic research finding on the mode of action of fluoroacetate poisoning. It is well known that fluoroacetate itself is not toxic but it is metabolized in animal tissues to fluorocitrate which is toxic.

Traditionally, everyone believed that fluorocitrate received its toxic action by inhibiting a certain enzyme within the cellular mitochondria and that the inhibition was irreversible. With this review, no biochemical basis for antidotal treatment could be seen.

However, Kun has pointed out that most of the early information in this area is in serious doubt and that any formal view based on the textbooks runs the risk of being faulty. Kun and his coworkers have suggested that the toxic action of fluorocitrate results not through this enzyme inhibition, which was previously theorized, but rather it results from its inhibition of citrate transport through the mitochondrial membrane.

Again, I apologize if this seems excessively technical. This has immediate practical implications, in that it opens some possibilities for development of an antidote to 1080 poisoning.

Mr. DE LA GARZA. That is very good, sir.

Let me ask you this. From your research, what can you tell us of the secondary effects in relation to other predators or other wildlife or the environment?

Mr. CONNOLLY. We have heard much of that also today, sir. I would be pleased to summarize the state of knowledge on that.

I just mentioned a while ago that the Denver Wildlife Research Center has not actively researched secondary or nontarget hazards of this material for many years. As a matter of fact, their research was pretty well summarized back in 1948 by Weldon Robinson and I should just like to read a paragraph in which he summed up his studies.

The employment of 1080 stations and the extent of such use is a matter for serious consideration. On the one side, this method has remarkable ability to reduce the most troublesome coyote populations. This can be accomplished at a fraction of the cost of any effectively operating other methods.

From an economic standpoint the resultant savings of livestock, which otherwise would fall prey to the coyote, weigh heavily in favor of the employment of this method. On the other hand, these poisons are severe in their killing action. They may be dangerous in the hands of inexperienced crop raisers. There is a loss of pelts that cannot be recovered and desirable or neutral creatures inevitably will be poisoned.

With careful handling of stations, however, these losses may be kept at a low level.

In discussing secondary poisoning, sir, I would point out that there are two kinds of possible unintentional poisoning that must be considered in evaluating the use of 1080 or any other toxicant in nature. Secondary poisoning in reference to 1080 used against predators would occur when a coyote ingests 1080—let us say the coyote bites the toxic collar. He dies. Any scavenger that feeds on the carcass of the dead coyote would be a potential victim of secondary poisoning.

Let me say here that we have tried to get at this systematically by forcing magpies, which are a common scavenging bird in the West and is the species that would be most susceptible to this kind of poisoning were it to occur—we have caged magpies after capture, put them in a cage with the carcass of a coyote that bit a 1080 collar and died. We have kept the magpies in there for a week and given them nothing else to eat and we have not poisoned any.

We had four starve to death.

We have done that with two coyotes poisoned with 1080 collars and also with one coyote that we fed the entire contents of a toxic collar. This is on the order of a 200-fold overdose. Those magpies survived as well, even though the entire muscles were fed to a group of five magpies and their entire intestines, stomach, and other viscera were fed to another group of magpies.

The other type of poisoning that can occur would be called primary nontarget hazard. In relation to the toxic collar the main risk of this type is presented by the collared livestock itself. After a sheep or goat is killed by a coyote who bites the collar, then the coyote will feed on the lamb. That is its normal manner.

The coyote will go its way and die, but then the dead collared lamb or goat remains there with the broken collar around its neck and any other species of wildlife that comes to scavenge on that carcass is at risk.

Here again we have taken a direct approach to the estimation of this type of hazard. This morning Mr. Howard showed you a slide of a dog feeding upon one of the dead collared goats. We have made three trials of this type with three different collared goats and three different dogs and we have not produced any lethal symptoms or sub-lethal symptoms, nor any evidence whatever of intoxication.

We have also exposed a group of magpies to one of the dead collared lambs for a week followed by a second week of panning the magpies on another diet, just for observation, with no observed effects on the birds.

Mr. DE LA GARZA. Thank you very much. I wish we had more time to use the expertise that you gentlemen have. However, from your prepared statements and your enclosures, I think you have been

most helpful to the committee. No one can say that it has not been a fair and impartial presentation showing the scientific data on both sides, which I think is very commendable of you as scientists.

We certainly respect and admire your scientific work.

On behalf of the committee and, I am sure, Mr. Wampler, I want to thank you for your cooperation and hopefully it will be continuous cooperation. We might come to you with questions periodically as we work on this legislation.

Mr. CONNOLLY. We will be available at any time, sir. Thank you.

Mr. DE LA GARZA. Mr. Wampler?

Mr. WAMPLER. Thank you, Mr. Chairman. It seems to me that either this morning or yesterday one or more of the witnesses testified that there was no antidote for compound 1080. I gathered from what you said, Mr. Connolly, that there is for human beings. I do not know whether they were referring to humans or animals. You indicated that there is an antidote for humans—

Mr. CONNOLLY. No; I did not, but there is a form of treatment. If you were to accidentally hit one of these collars with your mouth and get a mouthful of the toxicant and swallow it, we would have our syrup of ipecac handy, as I do today in fact, and we would immediately administer it to you. You would vomit up everything in your stomach including the poison. You would then be indebted to me for the rest of your life for saving you. [Laughter.]

However, if this first aid treatment is not done—and again, we do not know how promptly it must be done to be effective. This is a subject that could be researched. You would certainly die from it and there is no antidote at this time.

The research workers, Dr. Kun and the Australian people are holding out the hope to us that they may be able to develop an antidote. As a matter of fact, they have an antidotal procedure that is effective in tissue cultures. It is not yet ready for tests on the whole animal.

Mr. WAMPLER. In view of the results of research on compound 1080 that have been conducted since 1972, do you feel that the 1972 decision to cancel 1080 was based on adequate data and documentation? I guess I should say, the 1979 memorandum of Secretary Andrus.

It is my understanding that since the cancellation order of 1972 there has been extended and extensive research on 1080. As I understand the Secretary's memorandum of 1979, it would preclude or cancel any future research. Is this decision predicated on adequate data and documentation?

Mr. CONNOLLY. Well, sir. I do not wish to be in a position of second guessing the Secretary of the Interior. I would point out that there has been no research done by the Fish and Wildlife Service on 1080 as a predacide, except in connection with the toxic collar and only since 1977.

I have earlier today reviewed the other kinds of data that were available on the use of 1080 in toxic baits. Those data indicate that there is virtually no risk of secondary poisoning due to the use of 1080 in toxic baits for predator control. The data indicate that there is substantial risk of nontarget primary poisoning of nontarget species that might ingest the bait material if it is improperly exposed.

The placements of these baits then becomes critical in the proper use of the substance and was the subject of very extensive guidelines and directions back at the time that it was used.

Those are substantially the data that are available.

Mr. WAMPLER. Dr. Wade, would you care to comment on that?

Mr. WADE. I would like to elaborate very briefly, Congressman Wampler, on Mr. Connolly's statement with respect to antidotes. He was correct. However, there may be and frequently is a misconception of what constitutes an antidote. There are really very few true antidotes.

One of them is "2-PAM," a compound used to treat organophosphate compound poisoning and another is the use of some of the nitrites to treat cyanide poisoning.

In truth, most medical treatment is symptomatic treatment, designed to alleviate symptoms.

The belief that ingestion of 1080, unless it is emitted through vomitus in short order after ingestion, is lethal is not necessarily true. The health department in Sacramento, Calif. did a survey of all of the known recorded cases of 1080 poisoning in 1976 in response to the current RPAR action by the EPA against 1080, 1081, and strychnine.

If I recall the figures correctly—and I apologize if they are not quite accurate—I believe there were slightly in excess of 50 percent of survivors out of 56 poisonings, which included both accidental and suicidal poisonings, so it is not—to put it in more succinct terms, the doctor who assembled this data pointed out the risk from aspirin was slightly greater in the recorded cases of aspirin poisoning in Sacramento. I do not mean to be facetious, sir, but only to point out that many many compounds are toxic and a symptomatic treatment can alleviate them in many many cases.

I would give you a specific case in point recently where water was the lethal factor—an excessive dose of water.

Mr. WAMPLER. Dr. Knowlton, do you care to comment on that?

Mr. KNOWLTON. No, sir.

Mr. WAMPLER. Let me express my appreciation to each of you gentlemen for your presence here and for your obvious contribution. We appreciate it. I hope you will be available should the committee have any additional questions to propound to you in writing at some time, or we might ask your professional opinion on any situation confronting the committee, and that you would share your knowledge and professional judgment with us.

Mr. WADE. We would be pleased to do so.

Mr. DE LA GARZA. You have been most helpful.

The next witness is Mr. Martin Wardlaw, president of the Texas Sheep & Goat Raisers Association in San Angelo. Mr. Wardlaw lives in Del Rio.

We welcome you and would be happy to hear from you at this time.

Testimony of

MARTIN HARDLAW**President
TEXAS SHEEP AND GOAT RAISERS' ASSOCIATION**

Mr. Chairman and members of the committee, I am Martin Hardlaw, president of the Texas Sheep & Goat Raisers' Association and a sheep, goat and cattle rancher from Del Rio, Texas.

I would like to take this opportunity to express our appreciation to the Chairman and other members for introduction of H.R. 6725. This legislation was introduced because Congress recognizes that the Department of Interior is not carrying out the predator control program as directed by the Predator Control Act of 1931. The 1931 Act clearly directs that a protective predator control program will be conducted. A protective program is absolutely necessary if we are to stay in the sheep and goat business, and anything less is unacceptable.

Prior to 1971 a protective program was being conducted in Texas. To do this, a buffer zone was established surrounding the sheep and goat raising areas of the State. This was accomplished by the use of 1080 stations and strychnine drop baits. Coyotes were killed before they reached the sheep and goat country. When coyotes did get by the buffer zone, there were enough predator hunters to take the few that slipped by. One very important point that must be remembered is that a sheep and goat man cannot tolerate even one coyote in his pastures. We have enough predators to contend with --- bobcats, foxes, and in some areas, eagles and mountain lions --- without coyotes.

It is very clear to us that the only way a buffer zone can be effective is by the use of chemical toxicants, especially 1080. This has been proven since the ban on 1080 in 1972. Immediately following the ban on 1080, an attempt to maintain a barrier with helicopters was undertaken. It soon became evident that Interior had no intention of pumping enough money into the aerial hunting budget to get the job done. This was the real clincher --- had Interior really wanted to conduct a protective program, they would have increased their budget accordingly. It is my opinion that there is not enough money in the U.S. to take the place of the toxicants. The facts are that in 1971, the year before the ban, chemical toxicants made up 80% of the predator control program. Suddenly 90% of our control program went down the drain, and there we sat! In retrospect, it is now evident that the 1080 work in the buffer zone was keeping the coyotes at a low enough level

so that they were not bothering calves. However, it wasn't long until the numbers built up enough to start causing lots of problems in the cow country.

I come here today in full support of H.R. 6725 with only one suggested amendment. Section 3(c) describes very well what must be done, and that is to use every means possible to control predators. It doesn't matter to us how or what tools are used as long as a protective program is conducted that is as good as what we had before 1965. If it takes the National Guard, then fine; however, it is evident that to get the job done, 1080 will be required.

We, therefore, support immediate research on 1080. This research will prove that this chemical can be used without danger to the environment. There is absolutely no excuse for the Federal government allowing needless losses to coyotes when effective tools are available to control them. During these critical times, how can anyone justify the needless loss of one meat-producing animal, much less millions, just to satisfy a small group of protectionists.

While research is being conducted to discover --or re-discover-- needed toxicants, every tool available must be used to accelerate our control program. Research has proven that 1080 can be used in the toxic collar without any harm to anything except the sacrificial lamb and the coyote that kills it. Research further proves that the sheep and goat producers can use this tool more effectively than anyone else. To be effective, the collar must be available at the first sign of trouble. There will not be time to call two or three people and then wait three or four days to get started. However, it is important to remember that the collar is only a corrective tool and could never be depended upon to be a protective control method.

We further support the concept of the establishment of an ad hoc committee to review the animal damage program. This committee must be made up of people who understand that protection of livestock is the purpose of predator control, and it must be made clear to the Department of Interior and the Department of Agriculture that these people will be involved in planning the control program.

I would offer only the following recommendation, and that is on Page 2, Line 15, strike the period and add "for the protection of livestock," as protection is absolutely necessary.

It is time for us to be realistic about the predator control issue. Look at the philosophy of the Interior Department and the people who work in the agency. I imagine that 98% of the professionals working for Interior were trained in wildlife biology or similar lines of study. It is my understanding that while pursuing

this line of study a person quite naturally becomes protective of wildlife. Consequently, the entire Department of Interior attitude is one of protecting wildlife... no matter whether it be a whooping crane or a coyote.

I am in no way criticizing these dedicated people, as I agree that certain wildlife species need protection; however, there are other species of wildlife from which man needs protection, and this is where the conflict comes in: Our livestock must be protected if they are to yield food and fiber.

Next I ask you to consider the philosophy of the Department of Agriculture and its employees. Probably 98% of the USDA professional staff was trained in agriculture production, management or economics. This training is directed toward the protection of the products raised by the farmers and ranchers...whether it be cotton or livestock. It is, therefore, evident that the philosophy of USDA is to protect agriculture production. Since this is the case, I sincerely believe that the predator control program would be much more effective as a responsibility of the Department of Agriculture. This is certainly not a new concept, as the original law of 1931 placed predator control in Agriculture. It should also be noted that immediately following the Leopold Report in 1965 Senator John Tower of Texas introduced legislation which would have moved the control program from Interior to Agriculture.

There are many areas which I have not even attempted to cover...losses to predators, estimated amount of sheep and goat production in Texas without predators, and the list goes on and on. Most of this information will be covered by other witnesses far better than I could manage in the time we have.

Mr. Chairman, I would again like to thank you and the members of the committee for your concern for the sheep and goat industry as evidenced by the introduction of H.R. 6725, and I would urge the passage of this much-needed legislation.

We in agriculture are being asked to produce more and more to feed an ever-growing nation. Livestock producers must have protection from predators if we are to accomplish this task.

Mr. DE LA GARZA. Thank you very much, Mr. Wardlaw.

Mr. Wampler?

Mr. WAMPLER. Thank you, Mr. Chairman.

Mr. Wardlaw, I want to thank you for your statement. I assume that you were in the committee room this morning when Mr. Howard made his presentation.

Mr. WARDLAW. Yes, sir.

Mr. WAMPLER. You saw his slide presentation as well as heard his testimony. Was that a fair and accurate presentation, do you think?

Mr. WARDLAW. Yes, sir. I believe it was. It painted the picture pretty well and I thought the slides were excellent. I thought they did a real good job of showing what our situation is.

Mr. WAMPLER. You think it was a fair and objective recital of the situation that Mr. Howard was faced with as a producer and what others in your area would be facing. Is that correct?

Mr. WARDLAW. Yes, sir. The only difference is that in our part of the country most people would not have put up with what Mr. Howard has put up with. They would have gone out of business a long time before they suffered the losses he has.

Mr. WAMPLER. If I remember correctly, Mr. Howard testified that he was prepared to liquidate his operation until he learned of the toxic collar. That kept him in business, or at least caused him to reconsider his earlier decision to liquidate his herd and close down business. Was that not correct?

Mr. WARDLAW. Yes, sir. I can certainly understand his position on that.

Mr. WAMPLER. I want to thank you for coming. Your testimony is helpful. As I say, we are sympathetic, but you came for more than sympathy. I know that. We will carefully consider your testimony and that of others who have testified.

We thank you so much for your patience. We appreciate it.

Mr. DE LA GARZA. Mr. Wardlaw, you live on the Mexican border and are acquainted with the economic and labor situation down there. Do you know of anyone who has attempted to being a sheep herder or someone to work on a ranch from Mexico that has been able to easily bring them in?

Mr. WARDLAW. No, sir. That cannot be done. As a matter of fact, I have friends in Mexico that have tried to get herders. There is a lot of country in Mexico that could be used, similar to the brushy country we saw in the slide program. They cannot even get herders in Mexico.

We are in a whole lot worse shape than they are on labor so we have to have loose grazing pastures.

Mr. DE LA GARZA. Mr. Wardlaw, we thank you very much for being here and for your patience in awaiting your time to testify. You have been most helpful and we certainly appreciate it.

Mr. WARDLAW. Thank you.

Mr. DE LA GARZA. The final witness is Mr. Jim Barron III of Spur, Tex.

We welcome you and would be very happy to hear from you at this time.

STATEMENT OF JIM BARRON III, REPRESENTING NATIONAL CATTLEMEN'S ASSOCIATION,
PUBLIC LANDS COUNCIL AND NATIONAL GRANGE

My name is Jim Barron III. I am a rancher from Spur, Texas and I serve as Chairman of the Animal Damage Control Subcommittee of the National Cattlemen's Association.

I am testifying for the National Cattlemen's Association, the Public Lands Council, and the National Grange.

We support bill H.R. 6725 with some changes. We don't think it goes far enough.

Depredation on livestock and on other agricultural products is a far more serious problem than most people realize. Perhaps it is underrated because the Fish and Wildlife Service has consistently underestimated, as well as misunderstood, the impact of depredation upon agriculture.

While depredation has caused many livestock producers to go out of business (with prime land being converted to nonagricultural uses) depredation actually has more of an economic impact on consumers than on productors. In the end, it is the consumer who pays for predation in higher prices for agricultural products.

It is ironical that at the same time the President is asking all of us to help keep prices down, his Secretary of the Interior is pursuing a policy which will push meat prices up by several hundred million dollars a year. Maybe the Secretary of the Interior needs to be recruited for the war on inflation.

The final environmental impact statement on the program to control mammalian predation in the Western states estimates that such predators killed about \$40 million worth of livestock in 1977. That loss increased meat prices by \$102 million, the statement says. But these cost figures are outdated and the livestock loss surveys on which they are based are not the latest and best available. If more comprehensive loss surveys were used and if the value figures for livestock losses were updated to today's higher prices, the

economic impact on consumers and producers from coyote predation just in the West would greatly exceed \$300 million a year.

This does not take into account the secondary economic impacts: the multiplier effect on other dependent segments of the economy and the harassment or injury of livestock not actually killed, as well as the considerable costs incurred by the operators in trying to protect livestock from predators.

By banning or restricting practically all of the effective means of predator control now being used, Secretary of Interior Andrus' new policy could double this economic impact on producers and consumers.

These are just the costs of predation from mammals in the 16 Western states. Predation from coyotes and other mammals is increasing in other areas of the country. From Iowa to Maine to Florida, nearly all states are reporting heavy livestock losses to coyotes and dogs.

Dr. C. Kerry Gee reported that 245.5 million head of cattle and calves were lost to coyote and dog predation in 1975 (*Journal of Range Management*, March, 1979). At that time the calves killed were worth \$31 million but today they would be worth more than two times that in market value and three to four times that figure in cost of production value. In 1975, nearly 71 million head were lost in the southeastern area of the United States, about 19 million in the North central states and over 33 million in the Great Plains.

Dr. Clair E. Terrill of the U.S. Department of Agriculture (Science and Education Administration) in a study of sheep and lambs losses over the last 21 years conclusively demonstrated that predator damage has expanded both eastward and southward throughout the U.S. and losses have steadily increased since the changes in the federal predator control program in the mid 1960's and since the Executive Order banning the use of toxins to control predators.

Dr. Terrill says that the value of the sheep and lamb loss to producers has risen from \$25 million in 1961 to \$98 million in

1978 and he states that predation is a major factor in the decline of the industry since 1960. "On the average," he says, "net returns could be doubled, or more, if predators were controlled."

So far, we have been discussing the effect on livestock from predation by mammals, mostly the coyote and dog. But mammals, including the coyote, also cause crop damages. And if we consider other types of predators, such as birds and rodents, the economic impacts on farmers, orchard operators and consumers run into additional hundreds of millions of dollars. Predation is a serious agricultural problem by any definition.

That is why the entire agricultural community is disturbed by Secretary Andrus' irrational policy concerning the western animal damage control program. If the animal damage control program is going to ignore the needs and value of agriculture ...if it is to be based on emotion rather than on scientific data, then it is not serving the intent of the original 1931 Act establishing the program.

Secretary Andrus' order banning further research on the efficacy of the predacide 1080 just when the scientific researchers tell us that all evidence points to its safety is a form of anti-intellectualism. He, in effect, is saying, "Don't study it further, we are afraid you are going to prove it safe!"

The only excuse the Secretary gave for this action is that such research is "controversial." It is controversial to seek the truth? (In a recent meeting, the Secretary indicated that he was not familiar with the results of the research already done on Compound 1080.)

Mr. Andrus also banned denning and restricted aerial hunting and the use of traps, also on the grounds they were "controversial."

With the elimination of toxic methods of control (some years ago), these methods were about the only vestiges of predator control being used. Without such methods there is no effective control of predation.

The Secretary's "Alice in Wonderland" policy is to emphasize

corrective control using non-lethal, non-capture methods and to disturb only offending animals. The livestockman is supposed to scare off the coyote. Not just any coyote, just the one eating his livestock! I suppose if the rancher scares the coyote badly there will be another Secretarial policy issued.

The suggestion by the Secretary that husbandry techniques and providing more extension services can take care of the problem illustrates the woeful lack of understanding that he and the Department officials have concerning ranching in the West. Much of Western livestock grazing covers millions of acres of open range, both private and public. Can you imagine stringing millions of miles of electric coyote fences across this vast expanse or gathering up 53 million cows and 15 million sheep and putting them into barns or sheds every night to protect them from coyotes. Depredation is so widespread and unpredictable that the fact that the Secretary would even suggest fencing, shedding and shepherds as practical solutions not only boggles our minds but insults the intelligence of the scientists and professionals in this field. None of the non-lethal methods will provide more than extremely limited control.

I note that several predator researchers are scheduled to testify during this hearing. I am confident they will speak in more detail on the research on compound 1080 and on the impracticality of Mr. Andrus' nonscientific policy.

As far as expanding extension information to ranchers is concerned, the Extension Service says, in effect, that they are already dispensing all they know; there is nothing new without further research.

In promulgating his policy, Secretary Andrus choose to ignore the professional advice of his own experts and to bow to the pressure brought by certain individuals on the Council on Environmental Quality who have no special knowledge of the livestock industry or of predator problems.

Perhaps another clue to the source of his policy is the fact that he placed Ms. Cynthia Wilson in charge of seeing to it that the program was implemented. Ms. Wilson, besides being on Andrus' staff, is a Vice-President of the Animal Welfare Institute.

Apparently--since there is no scientific basis for any of his conclusions--his policy is based on some kind of selective concern for a certain species of animals. The same concern is not shown for the calves and lambs that are disemboweled by coyotes. As a matter of fact many coyotes kill or injure livestock not for food but just for the joy of it.

Of course coyotes have a role in our ecosystem and they should not all be eradicated. (They couldn't be even if we tried.) But man has changed the ecosystem by his settlement and we have found that many forms of wildlife must be managed to maintain certain values including wildlife values themselves. Deer populations, for example, are managed for the welfare of the deer themselves. Wildlife specialists would scoff at a non-lethal, non-capture policy for deer.

Predators likewise should be managed on the basis of the best scientific information and research available so as to maintain certain of society's values, including the values that humans find in eating food and wearing clothes.

Not only is it not conducive to good health for humans to stop eating food and (especially in some temperatures) to stop wearing clothes, it is unpleasant and often fatal to contract one of the many diseases spread by predators (rabies, plague, and a long list of lesser-known diseases).

Predators also transmit diseases to wildlife and livestock. Millions of dollars are being spent to eradicate the disease brucellosis with little success because a recent study shows that as soon as brucellosis is eliminated from an area the coyote carries it back.

We believe that it is necessary to get the Animal Damage Control

Program back to a sound scientific and factual basis. We don't think the program should be run by an official of the Animal Welfare Institute, nor a cattleman or a sheepman or a politician who believes that "know-nothingism" is better than the truth. If the program involves "controversial" issues, that is all the more reason why the administration of the program should be transferred to the professionals and to an agency that will seek the greatest good for the greatest number.

We and a number of other organizations which I shall mention later have agreed that the Animal Damage Control program should have the following objective:

Development of an animal damage management program that effectively mitigates agricultural economic losses, prevents human health hazards caused by predators and other animals, protects wildlife resources, and maintains agricultural lands for agricultural production.

To achieve the scientific objectivity and integrity that this program should have, we recommend that the Animal Damage Control Program and all research on predators be returned to the Department of Agriculture where the ADC program originally resided.

The Animal Damage Control Act mandates the suppression and control of animals that spread diseases and animals that are injurious to agriculture, horticulture, forestry, etc.

The Department of Agriculture already conducts predator research. It has jurisdiction over the Extension Service. It has the expertise and knowledge to evaluate the extent of predator damages to agriculture and what control methods are practical, feasible and safe. It has long been involved with animal health and diseases spread by animals. It is familiar with wildlife issues since most of the nation's wildlife are on farm lands.

The U.S. Fish and Wildlife Service which now runs the ADC program admits frankly that "in light of the Service's primary responsibility of conservation and protection of fish and wildlife resources," it has chosen to twist the meaning of the Animal Damage Control statute. The ADC Act is no longer appropriate, the Service

says, in light of changed attitudes and perspectives (p. 2 & 4, Final EIS on ADC program in Western U.S.).

Therefore, we believe that the ADC program more properly falls under the jurisdiction of the Department of Agriculture which is more familiar with agriculture and with consumer needs and safety. Such a change may help to bring more objective professional judgement and responsibility back into the conduct of the program. It is obvious from Mr. Andrus' recent policy that the Department of the Interior will overrule any sensible and practical recommendations from personnel in the Fish and Wildlife Service who recognize agricultural needs. It is apparent that Interior is not able or willing to carry out the balanced animal damage control and research program outlined in bill H.R. 6725.

We suggest that H.R. 6725 be changed to provide for such a transfer. The legislation should direct the Secretary of Agriculture to develop and implement the program and control methods specified in the bill; and also that the Secretary of the Interior should be directed to cooperate with the Secretary of Agriculture in carrying out the program on public lands administered by Department of the Interior by utilizing lethal and non-lethal methods and by using toxicants such as Compound 1080.

It is important to realize that much of the land in the West is suited only for livestock grazing. Other agricultural pursuits are not possible. If such ranchers go out of business because of Andrus' hard and fast policy, they have no other alternative means of making incomes.

The following joint statement opposing Secretary Andrus' animal damage control policy and supporting transfer of the program to the Department of the Interior has been endorsed by the National Cattlemen's Association, Public Lands Council, National Grange, National Wool Growers Association, National Farmers Union, National Turkey Federation, National Animal Damage Control Association, National Association of State Departments of Agriculture and the National Agricultural Chemicals Association:

STATEMENT

Regarding

The Secretary of the Interior's policy decisions of Nov. 8, 1979 on the Animal Damage Control Program

We believe that the implementation of Secretary of the Interior Cecil Andrus' directives of November 8, 1979 regarding the Animal Damage Control Program (ADC) will result in greatly increased livestock losses due to depredation. Such losses, in turn, will increase consumer costs and have other undesirable economic, social and environmental effects.

We find that the Secretary's directives are not based on scientific advice or established facts. There is no scientific basis for his decision to ban further research on the predacide "1080" and the use of the practice of "denning;" nor is there any scientific or practical reason to restrict aerial hunting and use of traps to control predator numbers.

There also is no research or evidence to indicate that non-lethal, non-capture methods of predator control could provide a practical solution to the depredation problem. Until there is such evidence, such methods should not be established as "policy goals."

Current methods of predator control should not be abandoned or restricted unless and until it can be demonstrated by scientific research that there are feasible substitute methods available that will not result in increased livestock losses.

Furthermore, it is not reasonable to claim, as Secretary Andrus does, that a cut in the ADC operations budget will provide "the same level of livestock protection."

We believe that Congress should reaffirm the 1931 law which states that agriculture should be protected from depredation.

Therefore, we jointly support the development of an animal damage management program that effectively mitigates agricultural economic losses, prevents human health hazards caused by predators and other animals, protects wildlife resources, and maintains agricultural lands for agricultural production.

Since the Department of the Interior apparently is unable or unwilling to implement such a program, we recommend that the administration of the ADC program, and predator research, be transferred to the Department of Agriculture.

Mr. BARRON. Mr. Chairman, along with Mr. Leonard Noh, I have been coming up here for 8 years trying to achieve a workable program. In that 8 years the livestock industry has lost hundreds of thousand of animals. We feel that we have made the environmentalists hundreds of thousands of dollars. With every little spat that develops they have a newsletter going out to their constituents asking for more money. I will introduce a copy of such a letter.

That is about all that we have accomplished. We have received many promises. Our hopes have been up many times.

The results of this hearing, the efforts of the participants, and the effect of your legislation, sir, is the grandest hope of achieving a workable solution that we have ever had. I thank you.

Mr. DE LA GARZA. Thank you very much, Mr. Barron.

Without objection, the two pieces of material which you intend to send will be included in the record at this point.

[The attachment to the statement is held in the subcommittee file.]

Mr. WAMPLER. Mr. Barron, I want to compliment you on a very comprehensive statement. I agree with most of what you had to say.

You alluded in your statement to the fact that the Secretary of the Interior did not seem to want to continue this basic research on predicide 1080 because it was controversial. You know, if the Congress of the United States were only to act on those measures that were noncontroversial, I doubt that we would get too much done. Maybe the country would be better off if we did not do so much around here.

Mr. BARRON. I agree. [Laughter.]

Mr. WAMPLER. The point is that here is a major public policy determination that has to be made. Somebody is going to have to make it. Under our separation of powers arrangement, we have three separate but supposedly equal branches of the Federal Government. The Congress is one of those three branches.

We are the ones that are charged under the Constitution with the responsibility of legislating and it is the constitutional responsibility of the executive branch to administer and implement the law. I think that we are going to have to have some input from the executive branch.

I hope we will have the opportunity to ask Secretary Andrus as a witness before this committee his reasoning behind the decision. I have my own opinion. I think you have reached some conclusions and I do not fault those conclusions.

But the point is that we want solutions. I am not looking for a political issue. I think there are enough of those floating around in other areas without having to make a political football out of this.

As I view it, this is a question of the survival of a vital sector of our agricultural economy. I have nothing in the world against coyotes. On the other hand, I think we have to reach some reasonable balances and tradeoffs. I just do not feel that we have reached them up until now.

I commend you and others for your persistence in coming back year after year. I know how discouraging it must be to you. I just want you to know that there are some of us who are listening and are sympathetic and are going to do our best to give you some legislative relief.

I cannot assure you of that. I wish I could. I wish I could just wave a magic wand and this problem would be solved. Unfortunately, it is not that simple.

Mr. BARRON. We never tried that before.

Mr. WAMPLER. There is strong feeling on both sides of this. I do not question the sincerity of anybody for the position they have taken. I question the judgment of some but not their sincerity.

Our job, as I see it, is to try to fashion legislation that will address itself in a meaningful way to the concerns that you and others have expressed here. I pledge to you and others here that I will see if we cannot pass some legislation through the Congress that will at least enable us to move forward to find answers and solutions rather than seeing the industry continue to be pushed down and back. What will ultimately happen, if that occurred, would be the demise of the sheep and goat industry in this country as we know it today.

I appreciate your sincerity and concern. Let me assure you that we will be doing our best as quickly as we can to move this legislation through this committee and hopefully through the Congress.

Mr. BARRON. I appreciate your time, sir.

Mr. DE LA GARZA. Thank you very much.

This concludes this phase of our hearings on this legislation. The subcommittee will stand adjourned subject to the call of the chair.

[Whereupon, at 3:55 p.m., the subcommittee was adjourned.]

[The following material was submitted:]

STATEMENT OF HON. DICK CHENEY, A REPRESENTATIVE IN CONGRESS
FROM THE STATE OF WYOMING

Mr. Chairman, I want to commend you and the other members of the Subcommittee for holding these hearings on the predator problem.

While doing some research for my statement here today, I had occasion to look through the transcript of field hearings held in Idaho and Wyoming back in 1973 by the Senate Interior Subcommittee on Public Lands. Those hearings followed President Nixon's 1972 ban on the use of toxicants, and the sheepmen who testified back then were confronting the same problem as the producers who will appear before you this week. They had just been deprived of an important part of the means used to protect their herds from predators, and they were very concerned about the future of their industry. As it turned out, they had good reason to be concerned, for many producers have gone out of business since 1973 and losses to predators undeniably have been a factor in the decline of the sheep industry.

The industry was told at the time toxicants were banned in 1972 that there would be an extensive program of research and testing to find new, non-lethal and selective means of preventing livestock losses to predators. Now, eight years, millions of research dollars and many thousands of dead sheep later, they are told by Secretary Andrus that still more restrictions will be imposed on the control program and that fewer tools and methods will remain available, but there will be more extensive research and testing to find new, non-lethal

and selective means of preventing livestock losses to predators. For those producers who have managed to stay in business these past few years, there must be a strong feeling of *deja vu*.

Mr. Chairman, no one quarrels with the objective of developing non-lethal predator control methods. I am certain the livestock industry would love it if such means could be developed and effectively used. After all, such an eventuality would give them a non-controversial way to protect their livestock, which is what it's all about; and they would not have to come to Congress seeking support for an effective control program. But we simply aren't there yet, and while we should continue to work toward that goal, we must insure that in the meantime, the proper variety and combination of control methods remain available so that the industry can survive.

The government is obligated by specific statute to protect wildlife and domestic livestock populations from predators. I am deeply concerned that the Interior Department's new predator policy will put the government in the position of failing to meet its lawful obligations. The policy commits the government to a stepped-up effort to find more benign and less controversial ways to deal with predators, and that is admirable. But at the same time, it takes away more of the tools and methods now known to be effective in controlling predators, and by so doing, it leaves the livestock industry vulnerable to even greater losses, and, therefore, greater economic jeopardy.

One of the things that has intrigued me about Interior Secretary Cecil Andrus' new policy is its variation from the events and studies that preceded it, and from the reality of the situation.

It seems that the genesis of the events which brought us here today was in 1977, when the wool growers sought Secretary Andrus'

assistance in reducing predator losses by improving the effectiveness of the control program. Then, as now, the industry was suffering significant losses, and it asked for the Secretary's help.

As a result of the request, an advisory committee was appointed, public hearings were held, and an in-depth study was conducted by the U.S. Fish and Wildlife Service which substantiated the existence of serious losses, set forth the problems associated with the control program and discussed the consequences of various options for revising the objectives of the program.

That study was then followed by additional research and solicitation of agency and citizen comments which resulted in the production of an extensive draft environmental impact statement, and, later, an even more extensive final environmental impact statement. All of these documents, while discussing a variety of approaches to the problem, recognized in great detail the existence and magnitude of the problem and the need for corrective action. And then, in November of last year, came the Secretary's policy statement redirecting the focus of the federal program away from control of predators and toward long-range research on non-lethal ways to prevent predator damage in the future. There is nothing in the new policy to help now with the existing predator problem. In fact, it diminishes the number and kinds of control options that have been available. Given these results, the livestock industry must feel like it has been victimized.

The new policy sounds good, but given the fact that the government has already devoted many years to the same kind of research embraced by the Secretary with limited results, and recognizing that it will take a great many more years to achieve his goal, if it's achievable at all, what is the livestock industry supposed to do in the meantime? The producers cannot mark time awaiting the government's research results. The coyotes will not mark time.

The Secretary seems to have ignored the substantial body of information gathered during the study process and the recommendations of many who commented, including some in his own agency and the scientific community, in order to embrace the recommendations of a single agency -- the Council on Environmental Quality. If one compares the Council's comments during the environmental impact statement process to the Secretary's final policy, the similarity is obvious. In fact, much of the policy parallels word-for-word the CEQ's recommendations.

The trouble with this approach, Mr Chairman, is that CEQ has consistently refused to acknowledge the reality and severity of the predator problem facing the livestock industry.

The 1978 Fish and Wildlife Service study points out that the total direct economic loss to sheep and cattle producers in 1977 as a result of coyote predations was about \$39 million. In addition, the estimated negative impact on consumers due to coyote activity was \$98 million for beef and \$4 million for lamb during the same year. We can assume, given the time that has passed and the serious problems that have beset our economy since 1977 that these losses are even more substantial now. The problem is real, it's continuing, and the government can study new methods all it wants, but in the meantime, a lot of coyotes are going to continue to eat a lot of sheep and goats.

As for the control program that has been conducted these past several years, it hasn't prevented all losses, but it certainly has reduced them from what would have occurred without control activities. Has this program jeopardized predator species? According to the Fish and Wildlife study, it has not. The study concludes that "there are no significant adverse impacts on wildlife populations resulting from the predator damage control program as now conducted."

It points out that "a small per cent of total coyote populations are taken each year," but that there is "no threat to coyote populations in any significant area of the West." It also concludes that non-target impact is limited to "insignificant percentages of species that are abundant;" that there has been only one case where the ADC program inadvertently affected an endangered animal; and that the only program risk to humans is to pilots who engage in aerial hunting.

But despite these findings, the Secretary opted for a policy which, among other things, "will recognize the importance of predators to natural ecosystems," and advocated managing livestock in such a way that they won't be exposed to predators. "In some cases, a return to traditional methods (such as herders) should be seriously considered and encouraged," the Secretary noted, in seeming ignorance of the fact that herders are and always have been used to the extent that they can be found, and without recognizing that the policies of the U.S. Department of Labor have made it next to impossible for livestock producers to obtain herders.

The Secretary also saw fit to cease any further research on the chemical compound 1080, while permitting continued research on other toxicants "that do not have secondary effects, are selective and humane," despite the fact that there are no other known toxicants that have been subjected to the rigorous and extensive research and testing conducted to date on 1080, and despite the fact that results so far have shown 1080 to be the most responsive, and selective tool in coyote control that is available.

By banning 1080 research, the Secretary ignored the recommendations of his own Fish and Wildlife Service Director, Lynn Greenwalt, who urged acceleration of 1080 research on which the Interior Department

has already spent millions of dollars. Indeed, the Fish and Wildlife Service was, at the time of the Secretary's decision, preparing to seek EPA approval for registration of the chemical for experimental use. Current law requires that EPA could grant such a request only if there was substantial new evidence materially affecting the original decision to suspend and cancel 1080 registration. Given these safeguards and the favorable results to date from 1080 research, there is no justification for terminating this work.

Mr. Chairman, I hope the subcommittee, and ultimately the Congress, will see fit to enact the legislation introduced by yourself and Mr. Loeffler to afford the livestock industry some continued protection against predator losses.

Under a law such as you propose, the Secretary could continue with his research on non-lethal ways of preventing predator losses, but in the meantime, there would be a damage control program that hopefully would enable the industry to survive and prosper until such time as the Secretary's research might bring results.

As I understand the pending legislation, it would:

---mandate a joint program by the Departments of Interior and Agriculture to control damage caused by predators by permitting the use of both lethal and non-lethal devices, methods and chemical toxicants, including 1080;

---require continued research on chemical toxicants, including 1080, with emphasis on selective and environmentally preferred lethal and non-lethal toxicants; and

---require applied field research on non-lethal techniques and animal husbandry practices.

Under this legislation, the research embraced by the Secretary would move forward, but in the meantime, the industry would have an effective control program. That, Mr. Chairman, is essential, and I pledge to do all I can to help secure the enactment of the De La Garza/Loeffler bill.

Thank you for this opportunity to comment.

STATEMENT OF BRUCE KING, GOVERNOR, STATE OF NEW MEXICO

Mr. Chairman, studies conducted two years after the removal of toxicants by Executive Action, indicate that annual sheep losses to coyotes west-wide in 1974 amounted to about eight percent of the lamb crop and two and one-half percent of the adult herd, costing producers and consumers more than \$37 million annually. These general loss levels were the major reason that sheep producers discontinued sheep production in Utah and Wyoming. New Mexico losses were even higher, showing a loss of about eleven percent (approximately 66,000 lambs) of the lamb crop and three percent (14,000 head) of the adult herd.

New Mexico sheep producers have witnessed a 50 percent decline in sheep numbers since 1959. This not only impacts on the sheep industry, but also on many communities throughout the state whose economies rely heavily on the livestock industry. Reductions of this extent to the sheep industry thus can adversely impact heavily on the already depressed economy of New Mexico whose per capita income is ranked 43rd in the Nation.

Millions of acres of grazing lands, many under the jurisdiction of the Department of Agriculture (USDA) and the Department of the Interior (USDI), are infested with predatory animals, especially coyotes. As a result, it is often not feasible for producers to graze their stock on these lands. These grazing lands could be more effectively used and great financial losses could be mitigated if livestock producers were provided a more effective program to control predators.

I do support the objective of H.R. 6725 to develop and carry out a balanced animal damage control program that effectively utilizes both lethal and non-

lethal control measures. I also believe that preventative control measures should be permitted when and where necessary as determined by the local professional expertise.

At the present time, control programs, especially those that utilize toxicants, are drastically limited on lands under the jurisdiction of the USDA and the USDI. This presents a serious problem in New Mexico and most western states because federal, state and private land are intermingled. To provide for an effective program, I suggest that H.R. 6725 include language that permits and directs a balanced and effective program on all land including federal lands. Without this type of control, an animal damage control program is largely ineffectual.

Thank you for the opportunity to provide my comments on this important issue.



FILE THIS RECORD

Wildlife Management Institute

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DANIEL A. POOLE
President
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Secretary
JACK S. PARKER
Board Chairman

DAN T
April 10, 1980

Honorable E. (Kika) de la Garza, Chairman
Subcommittee on Department Investigations,
Oversight and Research
Committee on Agriculture
House Office Building
Washington, D.C. 20515

Dear Congressman de la Garza:

The Institute believes that it would be unwise to enact H.R. 6725 in its present form.

We recognize the need for predator control under certain circumstances to protect domestic livestock and poultry. There are times when appropriate predator control is beneficial to wildlife also. Thus, our concern is about the who, when, where and how of control, rather than the activity per se.

H.R. 6725 would shift some predator control responsibilities from Interior to the Agriculture Department. Predator control is controversial and probably always will be. Putting responsibility in an agency (USDA) responsible for commercial livestock production increases the risk that control aspects will be intensified and abused. The fact remains that this federal program impacts wildlife and should be administered by trained and experienced wildlife biologists in the agency primarily accountable for wildlife management at the federal level. That agency is the U.S. Fish and Wildlife Service. We oppose any of this responsibility being moved to USDA.

The Institute approves of the bill's direction for extended research to improve control products and techniques. We do not, however, support the legislative requirement that the federal government use and permit the use of compound 1080.

You should understand that the Institute is not unalterably opposed to the use of 1080. Very recent research results reportedly indicate that the compound can be a highly specific poison for coyote control when meticulously applied at the proper time and places by competent individuals. Use of 1080 in the new toxic collar being developed may be especially effective. Consequently, we do not think that the application of 1080 should be ruled out completely.

On the other hand, compound 1080, without question, can be extremely destructive of nontarget wildlife and domestic animals when used improperly. And there is a long history of misuse to back that up. Legislatively directed use of this toxicant by federal agencies and others would be a mistake. That could open the door too wide and encourage abusive use of the compound. Wildlife subsequently would be

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affected adversely and public opposition to the predacide would intensify. And Interior Secretary Andrus has stated that the new federal policy on predator control calls for ending 1080 research because it "is so controversial and arouses such high emotions . . ."

We believe that the long term interests of both wildlife and the livestock industry will be served best by working together to help expedite implementation of the new federal policy. Should it become apparent that the policy needs revising, we should work together to that end.

We urge the subcommittee not to report legislation such as H.R. 6725 at this time. The new policy should be given a chance to work. If the policy is proven defective and legislation is necessary, we would be pleased to respond to any requests for assistance the subcommittee might have.

The Institute appreciates the invitation to comment on this important matter and requests that this letter be included in the hearing record.

Sincerely,



Daniel A. Poole
President

DAP:1bb



National Wildlife Federation

1412 16TH ST., N.W., WASHINGTON, D.C. 20036

202-787-6800

April 16, 1980

The Honorable E. de la Garza
Chairman, Subcommittee on Department
Investigations, Oversight, and Research
Committee on Agriculture
U.S. House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

The National Wildlife Federation is pleased to submit the following comments on H.R. 6725, the Animal Damage Control Act of 1980, for inclusion in the record.

The National Wildlife Federation is a non-profit, conservation, education organization with 4.6 million members and supporters nation-wide. We promote the sound and scientific management of our natural resources. Predator management is an issue we have been concerned about for quite some time. Attached is the current NWF policy resolution on predator control.

As you know, the problem of livestock losses to predators has been with us for a very long time. It is a problem with a long history of controversy and concerning which many studies have been done. Unfortunately, there are still few clear-cut answers to some of the problems associated with the livestock industry and predation.

We recognize the fact that certain segments of the livestock industry consistently suffer significant losses to predators (particularly coyotes), and we support the concept of professional assistance in alleviating some of these losses. However, we feel very strongly that preventive control by predator population reduction is not the proper approach to take.

After many months of careful review and intensive study, the Secretary of Interior issued a memo on November 9, 1979, to guide the future of the Animal Damage Control (ADC) Program. In our opinion, the Secretary has proposed a very comprehensive and adequate plan of action, and is guiding the program in the right direction.

Other than what the ADC program is already doing under the guidance of Secretary Andrus, the only things H.R. 6725 would require are: (1) the establishment of an ad hoc oversight committee; (2) the cooperation of the Secretary of Agriculture; (3) research and operational use of compound 1080 (which is presently illegal for operational predator control use); and (4) emphasis on the use of "preventive control techniques" to reduce predator populations.

While we feel that the first two above would neither significantly add to nor detract from the present problem, we vigorously oppose continued work with compound 1080 and any attempt to reduce livestock depredations by a general lowering of coyote populations. We therefore oppose the passage of H.R. 6725.

The coyote is a highly successful and adaptable animal. Where other animals have perished, it is flourishing. However, coyote population levels are reflective of their habitat and food supply (mainly rodents and rabbits) and generally have nothing to do with the presence of livestock. Areas with high coyote densities have high rodent populations and the coyotes are functioning in an important predatory role. Because coyotes play such a vital role in the ecosystem, it would be a great mistake to eradicate them. Only massive poisoning programs could lower coyote levels to the point of halting all livestock depredations. Such an undertaking would be disastrous to the other elements of the environment, and could not possibly be cost-effective.

Compound 1080 is so hazardous a predicide that it deserves special mention. This chemical was developed in 1944 for use in controlling coyotes, however it is toxic to other animals in varying degrees. It is particularly toxic to members of the dog family, one pound of it being enough to kill approximately a quarter of a million coyotes. However, since it is also toxic to other animals, many thousands of non-target animals have died from 1080 poisoning. Exact loss figures are impossible to obtain because of 1080's mode of action. The chemical takes from one to twenty-four hours to act, then the animal goes through massive convulsions until it dies. Because the animal has had sufficient time to wander away from the bait station, it is impossible to recover many of the carcasses. The result is that animal damage agents are unable to properly assess the success of the control effort, and many wild scavengers and predators which feed on the bait become non-target victims of poisoning. Even if

the bait stations had the minimum amount of compound 1080 required to effectively kill a coyote, there would be more than enough to kill a kit fox, a gray fox, or even the endangered black-footed ferret. Bobcats, badgers, and golden eagles could easily die from eating just two of the minimum single lethal coyote doses. The National Wildlife Federation does not oppose further research aimed at developing a predicide that is specific to coyotes. But we feel it is time to abandon 1080. It is not a panacea for the livestock industry's predator problems.

The ultimate solutions to the predator problem will be proper husbandry practices, combined with effective non-lethal and offender-specific lethal techniques. We urge this subcommittee to reject H.R. 6725, and allow Secretary Andrus' program to continue.

Sincerely,



THOMAS L. KIMBALL
Executive Vice President

Attachment

NATIONAL WILDLIFE FEDERATION
35th Annual Meeting, Portland, Oreg., March 4-7, 1971

Resolution No. 2

MANAGEMENT OF PREDATORS

WHEREAS, the National Wildlife Federation recognizes the intricate relationships between species of wildlife and their environments; and

WHEREAS, it is recognized that predators serve a valuable function in the total ecological balance between species of wildlife and their habitats; and

WHEREAS, many natural conflicts occur between wild predator animals, game species and domestic animals, including livestock; and

WHEREAS, in specific instances it is desirable to manage those individual animals which consistently prey upon domestic livestock and which may be doing excessive damage to game species;

NOW, THEREFORE, BE IT RESOLVED that the National Wildlife Federation, in annual convention assembled March 4, 1971, in Portland, Oreg., hereby continues its opposition to the wide spread application of dangerous chemicals and devices and expresses the opinion that any control of specific predators should be performed by trained governmental professionals, either Federal or State, utilizing methods determined by suitable research and based upon proved need for management in each instance, when dangerous chemicals or devices are involved because of the potential hazards which they present to humans, domestic livestock, and to beneficial forms of wildlife; and

BE IT FURTHER RESOLVED that this organization expresses its strong conviction that, to be effective with the least possible damage to beneficial creatures adequate funds must be appropriated to allow employment of suitable numbers of properly trained technicians.

TESTIMONY OF
DR. DEDE ARMENTROUT
REGIONAL REPRESENTATIVE, NATIONAL AUDUBON SOCIETY
BEFORE THE
SENATE ENVIRONMENT AND PUBLIC WORKS COMMITTEE
25 April 1980

My name is Dr. Dede ArmentROUT. I am the National Audubon Society's representative for its Southwest Region. I have a Ph.D. in physiological ecology from Texas Tech University. I appreciate the opportunity to present to you and your committee the Society's views with respect to recently announced policy changes for the Animal Damage Control Division of the US Fish and Wildlife Service. The National Audubon Society is one of the nation's oldest and largest conservation organizations with a membership in excess of 400,000. Our interest in healthy ecosystems extends to predators, which are an integral part of most ecosystems.

We have been active in field and literature research involving predator-prey relationships for some time. The six National Audubon Society regional offices which serve the western United States have all been involved in predator-control issues for many years. Bob Turner, an Audubon staff member served with representatives of other public interest organizations, various government agencies and the livestock industry on Secretary Andrus's 13-member advisory panel on predator control. Recently, in East Texas, I have personally participated in three days of field testing on toxic collars containing sodium monofluoroacetate, better known as Compound 1080.

Although much heat has been generated by Secretary Andrus's announcement of new directions in Animal Damage Control research, we are somewhat at odds to understand why the livestock industry has reacted so vehemently. It appears that, much to the dismay of conservation groups, virtually no lethal controls have been taken away. Aerial hunting is still in effect, the M-44 program is still in effect, trapping and shooting will continue to

be employed. The Secretary has eliminated one highly controversial and relatively insignificant lethal technique: that of denning on public lands. Private landowners can continue the denning on their own property. The policy promises new emphasis on extension services and increased research in non-lethal controls. Secretary Andrus has promised that non-lethal controls will have to prove effective before they replace the lethal methods now employed. Frankly, it does not appear that the livestock industry has lost anything. In addition, successful research directed at non-lethal approaches will enjoy a much broader base of support, ultimately providing ranchers with controls which are effective for them and acceptable to environmentalists and the general public. The National Audubon Society supports Secretary Andrus's predator policy with respect to the items mentioned above.

For many years we have urged research and development of non-lethal tools for predator control. At the same time we have recognized that lethal controls were a political reality. We have urged that lethal controls, when employed, be species-specific, and in so far as possible, directed at the offending individual predator. A tool and technique currently under active experimentation by ADC shows much promise in the direction of individually targeted lethal control. I refer to the toxic collar. The toxic collar is a device containing a poison in liquid form. The device is placed around the throat of a sheep or goat. A predator attempting to bite the throat of an animal so equipped will pierce the collar and cause the release of poison into its own mouth. Theoretically, the offending predator and none other is poisoned. The National Audubon Society supports the concept of the toxic collar and views it as an effective lethal control that we can live with until and unless non-lethal techniques prove to be as effective.

One poison employed in research on the toxic collar has been sodium monofluoroacetate, also known as Compound 1080. This substance was banned by the Environmental Protection Agency some eight years ago, primarily because of its persistence and its high toxicity. At the time it was banned, Compound 1080 was widely used in high concentrations at relatively non-selective bait stations throughout the west. Field observations in the vicinity of 1080 bait stations revealed that killing was indeed non-selective. In addition, large concentrations of this highly toxic, chemically stable compound, scattered throughout western lands led to fears of water contamination. Wide distribution of a colorless, odorless, tasteless, highly toxic, highly stable poison with no antedote is indeed a situation to cause fear in a rational person.

Early results of limited secondary poisoning experiments, using collar-killed coyote carcasses as food for magpies, have given promising results. So far, there does not appear to have been a short term secondary hazard to magpies which were fed on collar-killed coyotes. Very limited, similar experiments with eagles and vultures also fail to demonstrate detectable short-term secondary hazards. Individuals of the livestock industry seized upon these preliminary and very incomplete results, erroneously concluding that Compound 1080 itself was safe and free from hazards of secondary poisoning. The livestock industry has begun to clamor for registration of 1080, suggesting now that all the fears of the '70s were unfounded. They failed to understand, and ADC failed to emphasize to them, that Compound 1080 as the ADC was using it in toxic collars presented a very different situation from that of the pre-ban bait stations. It is precisely the differences between the toxic collar and the bait stations which has generated tremendous confusion and misunderstanding within the livestock industry and the environmental community.

An understanding of the differences between effects of 1080 in collars versus bait stations is crucial to this committee's ability to make intelligent evaluations of the issue.

Preliminary results suggest that Compound 1080, at the dosages used in the recent toxic collar field tests, could kill an offending coyote without leaving a tremendous residue of poison in the environment and without making the poison readily available to other than the target individual. This would be especially true, if pastures were checked daily and broken collars and contaminated carcasses were removed. Compound 1080 placed in bait stations, in the dosages needed for an effective bait station, cannot offer the same environmental security. To understand why this is true, one must understand something of the way Compound 1080 works.

In its original form, you could say that Compound 1080 is latent. It appears that an enzyme inside the cells of the victim converts some of the compound to an actively lethal form: fluorocitrate. The fluorocitrate interferes with the cell's ability to process energy, and thus the cells quickly die. When cells in vital organs die, the animal dies. If an animal receives just a lethal dose, it is believed that all the Compound 1080 will be converted to other forms including the active lethal form that kills the animal. No residual Compound 1080 would be left in the carcass to pose secondary poisoning hazards. The actively lethal derivative of 1080, fluorocitrate, while deadly in the cells of the victim, is thought to be harmless to another animal feeding on the carcass, because it is believed to be detoxified before reaching the cellular level of the second animal.

If an animal receives multiple lethal doses, its cells will still begin to convert the Compound 1080 to fluorocitrate and other derivatives,

but the animal will die before all of the Compound 1080 is converted. Consequently, some Compound 1080 will remain in the carcass, subjecting scavengers to secondary poisoning hazards. The greater the dose of 1080, in excess of a lethal dose, the more 1080 will remain, and the greater the secondary poisoning hazard.

Obviously, the closer one comes to achieving an exact lethal dose, the greater the chances of minimizing risks of secondary poisoning. Toxic collars can, to some extent, control the amount of 1080 the target animal ingests. Bait stations, in which pieces of meat are laced with large doses of 1080, offer high risks of secondary poisoning, expose the environment to sustained presence of large doses of 1080, and are non-selective with respect to the offending animal. The persistence and toxicity of Compound 1080 during sustained exposure in bait stations have never been sufficiently studied.

Compound 1080 shows some promise of effectiveness and selectivity when used in a toxic collar program in response to specific predation. Compound 1080, in massive doses at bait stations does not show promise of environmental safeguards, or selectivity, needed in handling such a toxic and stable compound.

Even in a toxic collar program, there are many, though not endless, important unanswered questions about Compound 1080. Much further research is needed in critical areas. Some deficiencies are noted below:

1. Secondary poisoning studies are in the most preliminary stages with few species studied so far. More species which are likely to encounter and sample coyote carcasses should be studied. Statistical samples are needed.
2. No long-term sublethal effects of 1080 have ever been investigated. Reproductive interference has been documented in raptors exposed to other organic pesticides. This needs to be investigated.

3. Search for an effective antidote needs to continue.
4. Compound 1080 is metabolized to other compounds, not all of which have been identified. All the metabolites need to be identified and their role in potential secondary poisoning explored.
5. The actual mode of action of Compound 1080 needs to be pinned down.
6. Toxic effects, if any, of the lethal metabolite fluorocitrate should be studied. It is believed to be harmless when ingested, but as yet there are no experimental data to support that impression.
7. The minimum effective dosage in the toxic collar should be identified.
8. Persistence of 1080 and toxicity in carcasses and soil over time needs to be documented.

In departure from Secretary Andrus's announced policy, the National Audubon Society would urge continued research on Compound 1080 to answer the above questions. We are not afraid to seek the truth and we support research to that end, but we do not support a diverse, unstructured allocation to various states of a program that at this point needs close coordination and focus. We fear that states will implement premature, widespread "field tests" in the name of research without resolution of the significant questions and without proper environmental safeguards.

The ranching industry should recognize the possibility that, after thorough research, 1080 may be found unacceptable. Public objection to the substance, coupled with the dangers of such a powerful toxin, and the potentials for its abuse may combine to prove Secretary Andrus correct in the end. Compound 1080, even if exonerated in toxic collar applications may be too controversial to ever win broad public acceptance.

In the preceding my comments have been responsive to Secretary Andrus's announced predator control policy. Let me take this opportunity to place the National Audubon Society's responses to this limited issue in a broader perspective.

Today those interested in wildlife and healthy ecosystems may view with alarm the staggering losses that our natural renewable resources have suffered especially when they have been perceived in conflict with real or projected human needs.

Habitat loss seems the undisputed leader among the causes of wildlife loss and ecosystem disruption.

- 1) In the USA, 2.2 million acres of agricultural land per year are lost to development—primarily to urban development, other real estate development and highway construction.

Almost half of this annual loss of agricultural land is offset by bringing other lands into marginal production often through draining of wetlands or conversion of other high wildlife areas.

- 2) Erosion costs us about 5 billion tons of topsoil per year depleting or degrading terrestrial habitat while also degrading riparian, limnic and estuarine systems.
- 3) Habitat is also degraded through both intentional and accidental applications of some poisons, wastes, and other hazardous substances.

It appears that we are losing plants and animals at the rate of two species per week, worldwide.

In the vast majority of cases worldwide, when wildlife has come in conflict with human desires wildlife has lost.

Significant consideration of wildlife resources and significant protection of healthy ecosystems and their components have been recent in the United States.

Species richness, habitat diversity, health, normally-functioning ecosystems are all essential to survival. Whether individuals recognise this or not, impacts on components of the ecosystem return to touch all

of us. Today the accumulated threats to our ecosystems are monumental. Each individual threat may be rationalized away by some special interest group who would find it expedient and economically preferable to ignore environmental concerns. We recognize the need for animal damage control in legitimate depredation cases, and do not have fears for the immediate demise of the coyote. But we do fear the ultimate implications of an animal damage control mind-set which is so goal-oriented as to ignore the natural and appropriate role of predators, and is so indiscriminate in methodology as to ultimately threaten many components of the ecosystems on which we depend.

STATEMENT OF W. BERT DENNIS, PRESIDENT,
TEXAS ANIMAL DAMAGE CONTROL ASSOCIATION INC.

Mr. Chairman:

My name is W. Bert Dennis. For years I have been the owner-operator of a cattle and sheep ranch near Gail, the county seat of Borden County, Texas. I am President of the 50 year old Texas Animal Damage Control Association, Inc. In addition, I am a co-signer for the Association in the three party master project agreement between the U. S. Fish & Wildlife Service (U.S.D.I.), the Texas Agricultural Extension Service and our Association. As one of the official functions, I am the custodian of the Texas Cooperative Trapping Fund which is composed of money contributed by County Commissioners Courts, livestock protective associations and individuals as their share of the cost of predator control on properties which they own or lease. Until last year these funds equalled those provided by federal appropriation. The State of Texas through its Rodent & Predatory Animal Control Service provide the remainder.

Membership in the Association is almost evenly divided between cattlemen and sheep and goat raisers. Poultry and hog producers are becoming an essential part of this organization. They reside in all parts of Texas ranging from the Rio Grande Valley to the Panhandle, and from the Trans Pecos to deep East Texas. We do not have a large membership but the quality and integrity of the members is unquestionable. They know the problems created by cougars, coyotes, bobcats, foxes, skunks and raccoons most of which affect the management of wildlife.

livestock, poultry and control of wild animal borne diseases.

It is on the basis of my knowledge and experience and that of the membership that I respectfully request your attention to my testimony in this important matter. Attention to this program by the Congress is essential. The U. S. Department of the Interior which supervises the Animal Damage Control Program through the U. S. Fish & Wildlife Service has intentionally failed to implement the Act of March 2, 1931.

This lack of adherence to the principles of that law was due to directives issued by former Secretary of the Interior Stewart L. Udall in the early 1960's. From that time to the present the intent was to reduce the program, especially the predator phase, to the extent that it would naturally succumb through neglect. The current Administration seems intent on the same purpose. I am convinced, as are our Directors, that this plan has an excellent chance of success unless the Congress now in session takes remedial action.

I would like to place in the record some of the events and actions which have brought the program to its present condition, and I might add, a condition that has caused a serious decline in the esprit-de-corps of the most important element in the organization -- the field operators who do the actual work.

The program has been under continual official and unofficial review. The Act of March 2, 1931 was passed by Congress with the support of the Mammal Society. Leaders of that organization admitted that they knew little of the program.

They had been told by the so-called scientists of the day that predator and rodent control was upsetting the "Balance of Nature". They called upon the Division of Predator and Rodent Control of the U. S. Bureau of Biological Survey (now U. S. Fish and Wildlife Service) for an explanation of the program. As a result, not only did they give verbal support to the program but they also recommended a million dollar a year appropriation for ten years. The results of the investigation were largely due to the integrity and objectivity of both the Mammal Society and the Bureau representatives. At that time members of the Bureau, including the Director, were thoroughly familiar with all aspects of their total program and knew the value and the relationship of each. They paid particular attention to the word and the intent of Congressional legislation and eagerly accepted it as their mandate. It would be quite refreshing if such a situation were possible today.

Over the years predator and rodent control personnel at every level were frequently subjected to adverse and damaging criticism by "Balance of Nature" proponents. Many of these had no interest in hearing the facts. They had little firm support until publication of the Leopold Report in 1964.

This was the Advisory Committee on Wildlife Management appointed by Interior Secretary Stewart L. Udall. During the period of its investigation, committee members had little contact with Service personnel in the predator and rodent control

field. Nor did they visit with ranchers except for those who were known to have no need for control assistance. In essence, committee members wrote their report on the basis of pre-conceived notions.

The Committee declared that the work conducted was far in excess of the needs which supported the claims of the "Balance of Nature" enthusiasts. However, they made one unexpected statement: Compound 1080 was the most selective and humane method of control.

On the basis of the statement on excess control, for several years bills were introduced into the Congress that would have reduced the entire staff to six persons in the United States with a budget of \$105,000.

To further follow the direction of the Leopold Report, the U. S. Fish & Wildlife Service changed the name of the program to Division of Wildlife Services. This diluted the efforts of the field staff in what was now to be known as Animal Damage Control by the addition of duties in pesticide surveillance and wildlife enhancement. There was no increase in staff.

Seven years later, in 1971, a new investigative team was appointed by Secretary Rogers C. B. Morton. This, the Cain Committee, differed in its recommendations. Unlike the Leopold Committee, this one declared toxicants to be invalid because they were inhumane and non selective. Leopold classified traps as being inhumane. Cain recommended that landowners be trained in the use of this age-old tool.

The result of the Cain Report was the deletion by Executive Order 11643 of toxicants (Compound 1080, strychnine, sodium cyanide) from use on federal lands and in federal programs. Private landowners could not conduct their own work because the Environmental Protection Agency placed a ban on the interstate shipment of these chemicals for use as predacides. Those who possessed any of these materials were directed to send their supply to E.P.A. Regional Offices.

It would appear that the Cain Committee, the Sierra Club and the Defenders of Wildlife made decisions relating to poisons at about the same time that the Cain Committee was appointed by the Council on Environmental Quality and U.S.D.I. . Evidence of this is a suit filed by the two groups against U.S.D.I. regarding the damaging effects of poison used as a predacide. The U.S.D.I. response was to the effect that: "Let's wait and see what the Cain Report has to say and then we will put an end to poisons." This, as it turns out, was the secret agreement that we learned about at a later date and could do nothing about. Hearings were promised but not held. U.S.D.I. had made up its mind, and even with a change in political leaders still refuses to consider Compound 1080 or strychnine.

Later, at the behest of several rancher organizations, several extensive field tests were permitted by the E.P.A. which finally allowed registration of the field use of sodium cyanide in the M-44, along with 26 restrictions.

The attitude of this state of affairs by the Department

of Interior is well represented by its reaction to a request for training of ranchers in the use of the M-44. E.P.A. had granted the Texas Department of Agriculture a permit to test the efficacy and safety of the M-44 in the hands of ranchers. E.P.A. asked Interior for assistance in rancher training. Interior solicitors decided that Executive Order 11643 did not permit such assistance. U.S.D.A. solicitors decided that such assistance was well within the frame-work and the intent of E.O. 11643. This resulted in the requirement of Extension Wildlife Biologists that they learn the techniques as well as possible and proceed to train ranchers and farmers who requested such training.

I would like to emphasize that all this time the federal and state employees in the program with which I am associated were barred from assisting in this important program. However, since there was no one from whom extension personnel could gather the necessary information, two top level federal supervisors took time off the job to assist in the development of this important training program. (This attitude is far different from that which is espoused by U.S.D.I. today.)

Assistant Secretary for Fish, Wildlife and Parks, Nathaniel P. Reed, was strongly opposed to the entire program. He did not look upon native, resident wildlife as a federal responsibility. He has been quoted as saying that he did not see the coyote as a federal animal. One of his plans to get out of the business was his offer of a maximum of a \$300,000 grant-in-aid to any state that would take over the program.

The states did not accept because of the federal restrictions that would be a part of the grant-in-aid package.

The continued outcry over the arbitrary deletion of poisons without any hearings resulted in a modest increase in funds to further the use of mechanical methods. Program leaders were required to show ranchers that they could receive protection without the use of poison. The magnitude of the problem in Texas was such that the addition of a few dollars was of little value. Usually the employment of additional hunters will help solve strictly local problems for a short time. However, these federal funds were of no value for this purpose because the personnel ceiling did not permit the Animal Damage Control program any new positions.

The alternate was to institute a modest program of aerial hunting in Texas. Unlike other states the areas of critical need could not be safely hunted with fixed wing craft because of the rough terrain. Consequently, helicopters were used at much greater expense. But the federal allotment was so small that we had to use funds of the Texas Cooperative Trapping Fund which I mentioned earlier in this testimony. This program was expanded by an allotment from the U. S. Department of Agriculture. Interior would not assist with any addition.

The purpose of aerial hunting was to find coyotes that had evaded the best efforts of the resident predatory animal hunter and even that of expert trouble shooters. In addition,

it was necessary to work in outside areas in an attempt to contain coyote ingress from unprotected areas.

I would like to relate my own personal experience with aerial hunting. In 1946, when hunters were permitted to use poison as well as mechanical tools, I soon learned that if my struggle to develop a ranching enterprise were to be successful, I would have to do something to supplement what the hunters were doing. I was forced to go to the expense of purchasing and learning to pilot a plane with which to provide the extra effort needed. I wish to repeat: without aerial hunting I could not have survived in the ranching business. However, it was, and is only one of the needed tools. Until 1972, traps, snares, M-44's, strychnine and Compound 1080 were all in use on my property and that of my neighbors.

It would seem that with this array of methods the coyote population would soon be reduced but this proved to be wishful thinking. Although more predators were accounted for, populations still increased. This was forecast by supervisory personnel as a result of which they continually besieged the Denver Wildlife Research Center personnel for additional tools and cooperated with that group in every way possible in the field testing of the various candidate processes.

The ban on Compound 1080 was most serious over that part of the state which lies west of a line from Corpus Christi to San Antonio to Ft. Worth. In some counties, especially those in the Rio Grande Plain and the Rio Grande Valley, there was

no usable substitute. County Commissioners were unable to provide their share of funds for more than one hunter, whereas at least four were needed in each county to replace the loss of Compound 1080. In the sheep and goat raising area those who dared to allow at least a 10% loss remained in business; others were forced to seek an alternate source of income.

The search for an alternate enterprise in some parts of Texas, especially in the Hill Country of the Edwards Plateau, is a useless exercise in frustration. The terrain and the vegetation is intimately related to sheep and goat production. Although cattle are raised this is not a profitable venture on the relatively small ranches which are the rule in this area.

Poisons are uniquely adapted for use in protecting cattle because they can be quickly applied, removed on schedule and will cause an approximate reduction of coyotes in the neighborhood of 50%, all with little interference with calving periods and little effect on the future of coyotes in the area.

A factor frequently overlooked is the value of coyote reduction for the protection of game, especially deer. These animals drop their fawns at about the same time as coyotes are still feeding solid food to their pups at the den. It has been scientifically demonstrated that coyotes are a major source of fawn mortality. In much of Texas, the sale of deer leases to sportsmen is an important source of income to the rancher in time of the severe, recurring droughts. During the 1950 to 1957 drought, deer lease sales were the sole source of income

to South Texas ranchers. Livestock could not exist under these conditions. Coyotes and deer do reasonably well.

My frequent reference to Compound 1080 should not be construed as being the chemical of greatest importance. Nor do I intend to convey the impression that its return to field use would solve all our coyote problems. The facts are that along with the ban on this chemical, strychnine was also prohibited. This, at once, caused a serious problem in the protection of human and domestic animal health. In the presence of an outbreak of rabies, all wild carnivores may become carriers prior to their own death as a result of which humans, pets and livestock are subject to infection by this dread disease.

When rabies is confirmed by laboratory, swift action is necessary. It is necessary to reduce the number of other animals that may be bitten and so increase the number of carriers. Strychnine in a meat or tallow bait placed on the ground and covered from view by birds is an effective solution. Compound 1080 is not suitable for this purpose because the dosage would have to be too high to affect animals other than the canines. Such baits will attract and kill those carnivores whose range lies within the area of bait placement. No others are affected.

In our experience, when notice of an outbreak of rabies is diagnosed by health department laboratories it is possible to treat the area at the rate of 250 square miles with eight

men in ten hours. The only requirements are that baits be prepared and stored for such an emergency; that designated personnel are trained in the details of proper bait site selection and that the rancher be available to conduct the specialist over the ranch.

The Environmental Protection Agency is fully aware of the procedure and, at the request of the Texas Department of Health did permit the application of strychnine treated baits for this purpose on at least three occasions. As in the case of the M-44 training request mentioned earlier, personnel of the Animal Damage Control program in Texas were prohibited from participation in any form. As a consequence, certain officials again provided the training which the Health Department needed without delay.

The refusal by U.S.D.I. to participate is only one more example of its callous attitude towards the needs of people. It reflects refusal to adhere to the letter and the intent of Congress when it passed the Act of March 2, 1931.

The situation which existed prior to the President's Executive Order is not fully understood by many people. Even when all materials now banned were in full use, we were sustaining serious losses. It was obvious at that time that the local program was a failure. In an attempt to alleviate the situation since we had no response from U.S.D.I., the Texas Sheep and Goat Raisers sponsored a referendum as permitted by law in an attempt to secure sufficient funds to supplement the work that was already being done.

One of the problems we faced was that we were not fully aware of the policy restrictions placed upon the state program by U.S.D.I. These restrictions are contained in Man and Wildlife the Animal Damage Control Policy of 1965. As is usual, the restrictions in this policy were not as serious as those of a supplementary nature that were imposed by lesser officials of the U. S. Fish and Wildlife Service.

In the development of policies at any level, attention was paid to the objections raised by the groups which claim to be environmentally oriented. The fact that they know little of the environment of which we are speaking and care less, what they say or that which they demand is given close attention by U.S.D.I. The farm and ranch organizations and their spokesmen are given no attention. The attention paid to testimony from our Association during the hearings which led to the current U.S.D. I. policy is definite evidence of my contention.

Although project leaders are provided with the framework of a work plan and are required to make plans for their state, they labor under the restriction that permits reaction to problems but no direct action until after the fact. The basic idea is that attention will be given only when and where there is a demonstrated need. Project leaders have been instructed not to allow their assistants to accept the word of the rancher concerning losses. If the policy were followed verbatim in the field we would have no assistance unless a person accepted as being qualified by the hierarchy would

examine the remains and declare that a predator was the cause of death.

We do not need protection for dead animals, we need to protect the living.

When a cougar appears in a pasture it is a well-known fact that it will soon make a kill for food or several kills for sport. Although it prefers deer it will make a kill of whatever animal is easiest to capture at that moment. At this stage of the game hunters are not permitted to stop ingress of lions. They must first wait for evidence of a kill. They never know the extent of killing prior to finding this evidence.

Once evidence is found they must send word to the supervisor. In the remote parts of Texas where lions are numerous, post offices are rare and telephones are non-existent. But he is not permitted to act without permission. Consequently, damage may be severe and the lion may have moved on before the hunter can place his traps. Prevention is prohibited but only prevention can protect livestock in such cases.

The Defenders of Wildlife had complained that lions were scarce and so the prohibition was prepared and sent to the field. I can assure you that lions are not scarce in the habitats they prefer. Parks and Wildlife Biologists can attest to this.

Wild dogs can be a problem in some parts of the state. Control of these truly feral animals must be held in abeyance until the hunter makes a report to the supervisor.

It is then transmitted to the state office along with suitable documentation and then on to the Area Office, the Staff Specialist in the Regional Office, the Assistant Regional Supervisor and finally the Regional Director who issues his decision in writing. By the time it reaches the hunter, much damage has been done unless the hunter and the rancher take direct action then and there in violation of the directive.

The recent decision by Secretary of Interior Cecil D. Andrus includes emphasis on an extension education program in which ranchers and farmers are to be taught how to conduct their own control operation. (If such a program would have been effective in my area I certainly would not be spending \$450 per month to the Fund.) In order to conduct a training session the program must be sold to the people. But to U.S.D.I. this is solicitation and is not to be condoned. This was one of the severe criticisms in the Leopold Report. Although it referred to operations some of the latter day supervisors include extension efforts as being solicitation. You can imagine the county agent who is newly assigned to a county and sits in his office waiting for someone to appear and ask to be educated.

The most serious part of this prohibition is that the hunter is not permitted to approach a rancher to ask for permission to set equipment in order to assist a neighbor who is suffering from drift of coyotes. This was the most serious consequence of the Leopold Report. In many cases, I believe that much damage could have been prevented if hunters were permitted to do what was necessary, not fearful for their jobs.

Non-target species are those that are captured inadvertently. They are to be released. On the surface this appears to be a reasonable policy but in practice it has some ridiculous interpretations. Yet, as much as one may be amused, they create serious problems. If traps are set to prevent continuous damage in a chicken coop from what appears to be skunk depredation and a coyote, bobcat or fox is caught, it must be declared non-target and released. Kills cannot always be determined exactly; but if the trapper decided that it was a skunk, so be it. We are thankful that these people do not work under constant surveillance.

If a bobcat is determined to be a depredator in a sheep pasture and a coyote is caught, that coyote is non-target and must be released. The converse also applies.

If a non-target is killed by an M-44, it must be so reported. It must be included in the state's annual report because it has been demanded by environmental groups. They use these figures as a base for criticism of the program. They refuse to pay attention to the fact that the non-target catch is less than 5% of the total.

My brief reference to extension education needs further clarification. The intent of the Secretarial directive is that a staff of wildlife extension specialists in the U. S. Fish and Wildlife Service prepare leaflets for distribution to the state Agricultural Extension Services. This is unnecessary duplication and, I believe, it may even have some illegal aspects.

The land grant universities are the agencies having Congressional authorization to maintain Agricultural Extension Services. In Texas, the Department of Wildlife and Fisheries Science of Texas A & M University employs wildlife extension specialists, many of whom are fully qualified and do write leaflets on Animal Damage Control. In addition, they can and do conduct field demonstrations for the benefit of those who are interested in learning predator control techniques.

I value this work because it leads to a control effort that does not interfere with, but actually supplements the work of the professional predatory animal hunter. His main interest is the control of problems that are severe in nature. Consequently, most of the private efforts cover parts of counties where damage is less critical. In effect, the total effort becomes a means of preventive control in outside areas. I have already declared this action to be essential.

If extension education is to be conducted it should be done by the state agency having legal authority to do so under the general direction of the U. S. Department of Agriculture.

In testimony you may hear from others, I am certain, that the Missouri and Kansas Plans will be submitted as examples of what this program can accomplish. I would like to acquaint you with the facts as they refer to the Missouri Plan. I have received this information from Milton Caroline who was Texas State Supervisor for 21 years before his retirement on March 31, 1979. He speaks from his experience as assistant in the

supervision of the program as a U. S. Fish & Wildlife Service employee prior to his transfer to Texas in 1950.

An operational predator control program was in effect for several years in Missouri prior to 1940. Since there were problems with its lack of efficiency, the U. S. Fish & Wildlife Service met with the Missouri Agricultural Extension Service, The Missouri Wool Growers Association and the Missouri Conservation Commission so that the problems could be reviewed. It seemed to this group that under the local conditions, a professional hunter could not operate efficiently.

At that time Missouri was a farming state. Although the optimum size for a profitable farm was 132 acres, the average was about 85. Today, some of them would be classed as being at the poverty level.

The coyote population was located within a triangle having its apex at St. Louis with legs extending northwestward toward St. Joseph and southwestward to the vicinity of Joplin. Throughout the area coyote food was abundant. The Osage Orange hedges, the numerous streams, lakes and ponds, the lush vegetation, the straw piles and the mix of planted land supported a wide variety of insects, rodents, rabbits and birds upon which coyotes fed.

There were also a number of small bands of sheep along with dairy and beef cattle. Every farmer had his own flock of free-ranging chickens and turkeys. He also maintained more dogs than necessary and allowed them to roam wherever and whenever they desired.

Dogs were the real problem to the hunter. Missourians of that day loved their dogs and were very violent in their opposition to them being caught in traps even though they were on a neighboring or distant farm. Try as he would, the trapper was frequently unable to capture coyotes without interference from these animals.

The effects of the educational program which was initiated included demonstrations conducted under the auspices of the county agricultural agent, was a decrease in the number of dogs subjected to traps. The reason was that a farmer who planned to set traps for coyotes advised his neighbors. All dogs in the area were tied until the problem was solved for the time being and the traps removed. In many cases, the problem was solved as soon as the dogs were tied.

As an aftermath of World War II, small farms were bought up and converted to large ranches. The Missouri Conservation Commission saw that the educational had to be supplemented or even replaced by the operational approach. If the Commission had not taken the lead in the matter the original concept would have been a failure.

The Kansas Plan has been widely publicized in recent years but its chief proponent, an avowed opponent of operational programs has recently realized that there is a place for each; operational and educational.

In Texas, educational programs supplement the operational phase. They cannot replace it nor is there any intent that

this occur. I wish to note that in addition to the extension program, under Texas law, the Texas Rodent and Predatory Animal Control Service is a part of the responsibility of the Texas Agricultural Extension Service. That Service, then is in the unique situation of having a hand in both phases of Animal Damage Control.

I doubt that the situation in the public land states lends itself to education because educational programs, if they are to be effective, require that there be residents on the land throughout the year. This situation does not prevail in that part of the country.

But before an educational program can be effective, it must be based on unbiased facts. President Carter's Environmental message to Congress in 1977 contained statements which we know were based upon decisions decided upon by the Council on Environmental Quality. Practically every member of this White House group were well known for their opposition to Animal Damage Control before their appointment. (I see in the Livestock Weekly that CEQ and the Secretary's staff had purposely prevented him from knowing the truth about phases of the program before the Texas Predator Sunnit.)

CEQ erred in their first statement which became a part of the Presidential message. This is the admonition that we much recognize and agree with the principle that predators are important in natural ecosystems. I agree that vegetation and the rodents, rabbits and browsing animals that feed upon

it and the predators which kill and eat these herbivores are all part of a natural ecosystem. This is true in principle, but only to that extent. The premise is that predators control rodents and that without natural predation upon rodents there would be no vegetation. This is incorrect and misleading. Predators eat rodents but they do not control them to any noticeable extent. On the contrary, rodents control predator populations. If the food supply decreases, predators decrease. The converse is, of course, also true.

In much of central and west Texas in 1957 and 1958, cotton rat numbers irrupted astronomically. The damage they caused in vegetable, peanut, melon and grain producing areas in central Texas from the Rio Grande Valley north to the Red River was extremely serious. Predators of all species were abundant but the cotton rats increased for two years without limit. It was in the second year that coyotes, raccoons, bobcats, skunks, foxes and rattlesnakes flourished beyond expectation.

The delay in population increases in the predators was due to the difference in biotic potential between animals having multiple births and multiple litters each year and those having multiple births but single litters. When the natural crash of the cotton rat cycle occurred they practically disappeared leaving the predators to fare as well as they could. Coyotes, the most adaptable and diversified feeders among the predators turned their attention to sheep, goats, deer,

melons, peanuts and anything else that was edible. This soon put an end to the sheep industry in Maverick, Dimmit and parts of Zavala counties.

I wish to emphasize that although predators kill natural prey, they do not control them. Natural controls of real significance are disease, fire, flood, famine and similar natural disasters. It is true that coyotes are part of natural ecosystems but the part they play as control agents is minimal.

As the Secretary's decisions released on November 9, 1979 are read in their entirety it is evident that the main thrust is toward a reduction in the control of coyotes. It is a biological fact and one noted by most predatory animal hunters and ranchers that when there is a reduction in the numbers of one predator group, it is soon replaced by others. When coyotes are removed and not permitted to re-invade the area, and if the habitat is right, which it is in most of Texas, bobcats and foxes will increase. To state it differently, when one pound of predator flesh is removed, it is soon replaced by an equal pound of flesh of another species. For example, one average coyote can be replaced by two bobcats or three foxes.

The presence of predators may be a biological necessity but removal of coyotes does not cause a disaster. The smaller predators will increase and, except in the case of bobcats, these predators are much better qualified to find rodents and rabbits than are coyotes. More importantly, except for bobcats and foxes, they are not usually serious livestock killers.

When coyotes have been extirpated from local areas there have not been any disastrous effects upon the ecosystem nor do we expect any. During the 28 to 30 years that 20 to 25 counties in the Edwards Plateau had no coyotes after the red wolf-coyote hybrids were eliminated, there was no evidence of any ecological problems in that unique ecosystem. The noticeable result, aside from the flourishing of the sheep and goat industry was the steady increase in white tail deer. This soon reached the point where there was a shootable surplus.

This leads to a criticism of another statement made by the Council on Environmental Quality. I quote: "Scientific wildlife management involves taking, at maximum, only the intended target animals." This is not correct. Wildlife managers manage wildlife such as deer and quail, to name only two, to the extent that there will be a shootable surplus. This is not a case of "the intended target animal".

Wildlife management for sporting purposes, and that is what license holders are interested in, is for purposes of recreation. If there were no interest in hunting or fishing there would be no need for management. But since interest in these outdoor sports is as great as it is there will be need for wildlife managers to manage so that there will be a surplus of the game and fish they prefer.

I should point out that the hunters through the Pittman Robertson Act and fishermen through the Dingell Act pay for their sport. The environmentalists pay for nothing other than their law suits. The Pittman Robertson Bill was challenged by that group this past year,

I have dwelt upon this theme because we need to place the natural ecosystem principle in proper perspective.

The facts are that there are not, if there ever were, any natural ecosystems. The natural ecosystem ebbs and flows as do the tides. The system is controlled by forces such as those I have listed. If humanity is to exist; if there is to be a shootable surplus; if we are to raise food and fiber for food and clothing or trees for our dwellings, we must manage for the surplus, or more correctly - a sustained yield. Because of this, it is apparent that we live not in a natural ecosystem but in a managed ecosystem.

The farmers and ranchers who are the most successful are those who clearly understand the ecosystem in which they live and manage it to the full extent of their capability.

The trends in Secretary Andrus' decisions as well as that of the Leopold and Cain reports are directed toward no management. The real implication and one we have heard many times from our detractors, is no sheep. Animal Damage Control personnel have been told that if the program came to an end, the sheep industry would expire and that would be good for the country! This assumption is not true, we need more food and fiber - not less.

Studies conducted by the Economic, Statistics and Co-operative Service of the U. S. Department of Agriculture reveal that financial losses to the sheep industry approximate

\$30,000,000 each year of the \$360,000,000 yearly industry total. The loss to consumers due to both sheep and lamb predation approximates \$10,000,000. This research also revealed that the benefit derived from an increase in control of the major predators in areas of serious sheep, lamb and calf production would exceed the additional costs of control. Estimated numbers of sheep and lamb kills range in the 1,250,000 bracket.

About one third of the sheep producers in the West and Southwest lose in excess of 5% and one fourth lose 10% of their lamb crop to coyotes. In the same area, calf losses reach as high as 3.7% each year. In Texas, death losses of sheep and lambs due to predators amounted to 58% of all deaths in 1978 compared to 25% in 1967. Coyotes were the largest single cause of death losses during 1978 accounting for 24% of all sheep and lamb deaths. Goat and kid losses in 1978 due to predators amounted to 72% of all deaths compared to 45% in 1967. Coyotes were responsible for 24% of the total death losses to predators during 1978, followed by eagles which killed 20% and bobcats which killed 18%.

These are losses over which the individual rancher has little or no control without professional assistance.

Such losses are not new to many farmers and ranchers. In Texas, in 1915 losses averaged 10% even at a time when coyotes were fewer in number. Through federal, state and Association action, losses were reduced to an average of 3% in the 15 years of operation since 1915.

The statistics presented herein show that as a result of calculated negligence and obstruction by the Department and the Service, losses now approximate those of the World War I era.

It had not been my intention to include all this detail in my presentation but I feel it to be essential that the facts of the Texas situation are known to your Committee. I have studied the matter carefully and have decided that U.S.D.I. does not intend to conduct a viable Animal Damage Control program. I present in evidence the situation in which the U. S. Fish and Wildlife Service finds itself. This is explained in letters written to Secretary Cecil D. Andrus and Director Lynn Greenwalt by Milton Caroline, Texas State Supervisor (retired) and now our Association's Public Relations Consultant (Exhibits A & B).

Mr. Caroline's report to me on the basic elements of the statements by Secretary Andrus, Steven Jellinek of E.P.A. and Mrs. Armentrout of the National Audubon Society at the Predator Summit arranged by Texas Department of Agriculture Commissioner Reagan D. Brown, is contained in Exhibit C. Exhibit D is our Position Statement on Secretary Andrus' decisions.

For years we have been interested in removing the Division of Animal Damage Control (formerly Division of Predator and Rodent Control) from direction by U.S.D.I. and having it transferred to U. S. D. A. On March 26, 1965, when we realized the full thrust of the Leopold Report, our Association introduced a resolution for consideration by the Texas Sheep and Goat Raisers Board of Directors (Exhibit E).

On April 28, 1965, Senator Tower introduced in the first session of the 89th Congress a bill (S.1835) to provide for the transfer of the Division of Predator Control from the Department of Interior to the Department of Agriculture (Exhibit F). It was referred to the Committee on Commerce. (It did not have the full support of western sheepmen who grazed their flocks on Interior lands notwithstanding the Taylor Grazing Act.)

In my opinion and that of the Directors of the Texas Animal Damage Control Association there does not appear to be any future for our industry if we are to depend upon the federal government. We feel that even though federal funds would be lost, it would be in our best interest to cancel the Master Cooperative Agreement with U.S.D.I. In anticipation of what we may be forced to do we have prepared a contingency plan which is now under review by our Directors (Exhibit G).

Recently, we received copies of bills presented by Senator Tower and Representatives Kazen and de la Garza. Since they represent a step in the right direction, we endorsed them in letters I wrote to our Texas Senators and Representatives. At least these bills put U.S.D.I. on notice that the Congress is not satisfied with the Department's handling of the Act of March 2, 1931.

We hope these bills will be seriously considered in the Congress but our experience is such that we have little faith in U. S. D. I. We feel that an immediate transfer to U.S.D.A. is badly needed. In that agency our budget requests and other matters will be heard by such Congressional Committees as your Committee on Agriculture.

I appreciate having the opportunity to place our position in the record.

(The exhibits referred to are held in the subcommittee file.)



**International Association
of
Fish and Wildlife Agencies**

(ORGANIZED JULY 26, 1968)

May 2, 1980

Honorable Kika de le Garza, Chairman
Subcommittee on Department Investigations,
Oversight, and Research
House Agriculture Committee
1301 Longworth House Office Building
Washington, DC 20515

Dear Congressman de le Garza:

The International Association of Fish and Wildlife Agencies is a voluntary organization composed of fish and wildlife agencies in the United States, Canada, and Mexico, including the fish and wildlife agencies of all 50 states. We are vitally interested in the subject of animal damage control which your Subcommittee held hearings on April 16 and 17, and request that the enclosed statement be included in the record of the hearing.

The recommendations contained in the testimony were originally developed by the Association's standing Committee on Predator Policy which has been active since 1969. The recommendations were adopted by the Association in 1971, reaffirmed in 1977 and in March of 1980.

I believe the statement, which represents the best professional wildlife management judgements of this Association will be useful to you in considering the future of the Animal Damage Control Program.

Yours truly,

Dusty Zaunbrecher
Legislative Counsel

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Statement of the International Association of Fish and Wildlife Agencies
at an oversight hearing on Animal Damage Control before the Senate Committee on Environment and Public Works, April 24 and 25, 1980, Washington, D.C.

Mr. Chairman, I am Robert J. Tully of Denver, Colorado, member of the Animal Damage Control Policy Committee of the International Association of Fish and Wildlife Agencies. The International Association is a voluntary association which includes the Fish and Wildlife Agencies of all fifty states.

For the past 10 years, the Association has had a Committee on Predator or Animal Damage Control Policy as one method of coordination between the states, the Fish and Wildlife Service, the agriculture interests and others concerned over sometimes very complex issues. In addition this Committee recommends policy on behalf of its governmental members.

The following position statements were adopted in 1971 and reaffirmed by the Association during 1977 to guide the U.S. Fish and Wildlife Service in its policies from the state wildlife agency viewpoint.

- (a) Animal damage control should be performed or supervised by professional persons who are equipped to selectively treat animal damage problems in the most efficient and humane manner.
- (b) Because of potential environmental hazards, a qualified public wildlife agency should administer animal damage control programs through performance of services or regulation of private control agents. The national need for development and use of more efficient and humane control methods provides justification for continued federal leadership in an animal damage control program.
- (c) The nature and scope of an animal damage control program should be defined by an agreement between the individual states' wildlife agencies and the U. S. Fish and Wildlife Service, with the states exercising an option to accept or reject offered federal assistance.
- (d) Wildlife agencies in states that accept federal services should actively participate in documenting the need for planned programs, planning and execution of control programs, and developing public understanding.
- (e) The individual state wildlife agency should be prepared to assume the leadership and responsibility for a control program if the state does not opt to accept a federal program.

- (f) The 1967 Animal Damage Control Policy of the U.S. Bureau of Sport Fisheries and Wildlife (F&WS) provides an opportunity for efficient control of animal damage problems with a minimum of conflict with or hazard to natural resources or human welfare.

During 1978, Jack R. Grieb, Chairman of our Predatory Policy Committee served on the Secretary of Interior's Animal Damage Control Policy Advisory Committee and made the following recommendations in behalf of the Association for consideration by the Secretary and by the Fish and Wildlife Service.

Premises

1. A small but significant percent of sheep and cattle operators are experiencing a large loss as a result of coyote predation.
2. It is in the best interest of this nation to alleviate these losses through the application of professional damage control procedures.
3. Control methods should be directed at offending animals, not at the species.
4. Control efforts should be directed where possible at preventing damage before it occurs in specific areas or alleviating damage after it has begun in specific areas.
5. A combination of non-lethal and lethal methods should be provided for problem solution.
6. The management program should be selected on the basis of the best biological information available.
7. The program should be supervised by professional wildlife managers employed by State or Federal management agencies.
8. Each program should be done on the basis of an annual animal damage control plan for each state, promulgated each year with adequate period for review and comment by all interested parties including the public, State wildlife agency, U.S. Fish and Wildlife Service, stockmen, U.S. Forest Service and Bureau of Land Management. It should specify operational goals and procedures by areas and species.
9. Lethal and non-lethal compounds and techniques potentially exist which have not been identified.
10. Field trials using toxic compounds must be authorized by EPA to determine their effectiveness and identify potential problems. These must be conducted by the Fish and Wildlife Service on an experimental basis.
11. Effective techniques vary by geographical areas, topographical and other situations.

Options

1. Increase ADC funding to fit the need for the next five (5) years.
2. Utilize currently approved control methods for use in the proper mix according to the needs of the area. Aerial gunning, M-44, trap, snare and denning included.
3. Assist private operators in upgrading husbandry practices.
 - a. Improve the supply of trained herders.
 - b. Tax benefits for capital improvements to assist in lambing-shed construction, fence building, etc.
4. Increase Research Activities
 - a. Non-lethal techniques.
 - b. Lethal techniques.
 - c. Authorize field test 1080 on experimental basis by Service personnel.
 - d. Search for new lethal compounds which would be selective with minimal secondary effects.
5. Provide an animal damage extension effort in each state to assist landowners in resolving their own problems.

More recently, in 1978 and 1979, during development of the Draft and in making recommendations on the Final Environmental Impact Statement pertaining to the Fish and Wildlife Service's Mammalian Predator Damage Management for Livestock Protection in the Western United States, the International Association specifically recommended that the Secretary of Interior adopt Alternative VI (Increase Utilization of all Current Control Techniques) with the addition of consideration to take the offending animal when possible as the most viable of the choices presented.

The new Federal policy decisions, contained in Secretary Andrus' memorandum of November 8, 1979, are of extreme and obvious importance to the states especially because of the cooperative Federal-State arrangements in the conduct of animal damage control programs. The states, through their wildlife agency or agriculture department or in some cases both, have been full co-operators with the Federal government for over fifty years. We also consider the policy important because of its influence on not only the agriculture industry but on the coyote and numerous other species of resident wildlife managed by the states as well as migratory and threatened and endangered wildlife managed cooperatively by the states and the Department of Interior.

Despite these many years of cooperation the state wildlife agencies were not originally recognized in the policy memorandum. We were not included in the establishment of the interagency working group nor were the states mentioned as part of the Research Advisory Committee as was the livestock industry and the environmental community. Recently Secretary Andrus assured us that he did not intend to exclude the states and proposed representation from a State Conservation Agency on the Research Advisory Committee. Secretary Andrus also advised that he would soon be requesting additional assistance and participation in the implementation process so that our policy and operational activities concerns can be incorporated into the program.

The states wish to remain a full partner and desire to continue in their supportive role toward program accomplishment so that resident wildlife and the public will benefit according to the needs of the individual state.

The International Association has taken a position on a number of specific matters which are of interest to this Committee:

1. There should be a change of label by EPA to allow the use of the M-44 in wildlife management, not just to benefit livestock, particularly for management of certain predators which may have adverse impact on species designated as threatened or endangered by the Federal government or by any state.
2. The International believes that predacides should remain a viable tool for use in certain preventive and corrective damage control operational programs and recommends that the Fish and Wildlife Service continue research and field testing of Compound 1080 in the toxic collar, develop single dose baiting techniques to selectively deliver predacides and research, develop and field test other toxic chemicals and delivery systems which are selective, effective and efficient.
3. The International strongly opposes any transfer of authority for animal damage control from the Department of Interior to the Department of Agriculture.
4. Aerial shooting should be continued, including the winter period, under restrictive state issued damage control permits.
5. Selective denning for problem animals should remain an option for implementation as needed on a case by case basis.

In summary we strongly support focusing on offending individual predators and on effective corrective damage control, but also believe federal policy must insure opportunity for fair and reasonable preventive activities on both public and private lands when necessary. The latter must include lethal population reduction within specific predetermined areas. We maintain our long standing position that an offending animal damage control program must be carried out by a well-trained professional staff using a wide variety of lethal and non-lethal techniques in a mix according to needs of a site. This program should be carried out through the Department of Interior in cooperation with the state wildlife and state agriculture agencies for application on both public and private lands.

The International Association, representing the wildlife agencies of the several states, has pledged its support and cooperation to Secretary Andrus in assisting him to properly develop and implement an updated Animal Damage Control Program through continued review and participation in the decision making processes.

DEPOSIT
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S. J. ED



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